

Legal Infrastructure and the New Economy

GILLIAN K. HADFIELD*

Abstract: In the last two decades, the economy has undergone fundamental transformation with the twin structural changes of a great increase in the size of global markets and the internet-driven development of a platform for global exchange and work processes. These changes have transformed the economic demand for law: the demand for legal inputs that will support the creation of value in economic relationships. Not merely the quantity but the type of legal inputs required by the new economy is significantly different from those required by the old economy. The economic demand for law in the new economy requires support for the much higher rates at which economic relationships now cross both firm and jurisdictional boundaries, the more rapid depreciation of

* Kirtland Professor of Law and Professor of Economics, USC; Eli Goldston Visiting Professor of Law, Harvard Law School. I am deeply grateful to many colleagues and practitioners who have contributed to this work. In particular, many thanks to Harvey Anderson, Jonathan Anschell, Mark Chandler, Jim Cooper, Mitch Gaynor, Ramsey Homsany, Roberta Katz, Paul Lippe, Rosemary Martin and Kent Walker for their extraordinary generosity with their time and experiences; this work would not have been possible without them. I am also very grateful to participants in the *Leading Legal Innovation* Conference which met in San Diego in December 2008 and my co-organizer Stephen Burbank, and to those who gave me very helpful comments on earlier versions of this work in presentations or discussions: Yochai Benkler, Stephen Benson, John Seely Brown, Iva Bozovic, John Clippinger, John Coates, Bob Cooter, Aaron Edlin, Peter Harris, Bill Henderson, Bob Litan, Siobhan O'Mahoney, Larry Ribstein, Mike Roster, Eric Talley, George Triantis, participants in the Southern California Innovation Project's *Roundtable on Collaboration* and in workshops at the Center for Advanced Study in the Behavioral Sciences at Stanford, the Atheneum Club in London, the Berkman Center for Internet and Society at Harvard University and the law schools at USC, Michigan, Ohio State, Washington University at St. Louis, Queen's University and the University of California, Berkely. I am also deeply grateful to the Kauffman Foundation, the Mellon Foundation, the Center for Advanced Study in the Behavioral Sciences and USC Law School for their generous support of this research. Michelle Lubey provided superb research assistance.

legal solutions, the increased differentiation of legal problems, the reduced tolerance for legal transaction costs created by high velocity and global competition, and a greater need for integration of business and legal expertise in order to engage in the relatively constant, innovative problem-solving that the new economy requires.

In this paper I argue that our legal infrastructure—the socially available set of legal materials that economic actors can use to help govern relationships—has not kept up with this transformation in the economic demand for law. Empirical evidence for this claim includes the increasing levels of dissatisfaction in even the most elite corporate legal markets, the unprecedented impact of the Great Recession of 2009 on large law firms, and surveys and interviews conducted with corporate counsel. The primary basis for the claim of a mismatch, however, is theoretical. The attributes of our existing legal infrastructure—a heavy reliance on densely-worded and complex statutes, regulations and contracts; human-capital-intensive craft production methods; undiversified legal business models; almost exclusive reliance on mandatory legal rules imposed by public actors—are poorly suited to the nature of economic activity in the new economy. The reason our legal infrastructure has not adapted, I argue, is attributable to an even deeper level of legal infrastructure: the severe limitations on who may produce legal rules and other legal inputs (such as advice, document templates, norms and practices) imposed by our continued reliance on publicly produced rules and the excessively closed nature of our lawyer- and judge-controlled legal markets.

I. INTRODUCTION: LISTENING TO THE NEW ECONOMY

A few years ago I began asking general counsel at leading innovative firms about the kinds of problems they faced in getting the legal system to do what they needed it to do. Where does our existing legal system help, and where does it hinder, innovative activity, I wondered? What parts of the legal environment, beyond the obvious candidates of patent and copyright, were important to the innovative mission?

The answers I received were striking and not what I might have guessed. Yes, they complained, like all general counsel today complain (rightly so), about spiraling legal fees and litigation costs. But their principal focus was not on the cost of the law they used but rather the difficulty they faced finding the types of legal help they needed.

Kent Walker, General Counsel at Google, bemoaned the difficulty of reducing the reams of wasted paper and effort in managing the company's contract relationships. "Never, in ten years," he said, "has a dispute ever turned on the precise language of a non-disclosure agreement. Yet we still spend lots of time dickering about these things." In other areas, Walker has tried to bring some rationality to the amount of paper needed. "But I send them the two pages I think we need, and they chuckle and send back ten or more." And how, he wonders, can he give his legal teams the right incentives in contracting to recognize that sometimes too much legal wrangling or risk-aversion leads to lost or less valuable deals?

Walker's associate general counsel, Ramsey Homsany, told me about another problem. When Google acquired YouTube, it was faced with a massive problem of global regulatory compliance. YouTube shows up in over 100 countries around the globe, each with its own laws on privacy, intellectual property, defamation, and so forth. How do you manage a wicked compliance problem like that? Google has largely developed its solutions in-house. But, Homsany said, "it would have helped to build on others' experiences and frameworks for that. We'd like to be able to find someone who's done more than one of these, who's seen things we haven't seen. But that just doesn't exist out there across countries and regions. So we have to do it largely from scratch."

Mitch Gaynor, of Juniper Networks, emphasized a similar problem with the difficulty of finding integrated legal providers who can help this smaller (but, at \$3.5 billion in revenues, hardly small) firm to deal with a complex world. "What the market [for legal services] doesn't seem to understand is that firms like ours are global from Day One. We have folks working in teams all across the globe the day we start up." Two examples of the problems this creates are the following: Gaynor has to turn to a patchwork of providers to figure out how to make sure he is in compliance with the laws in all these jurisdictions. And when these far-flung team members—who collaborate seamlessly over the web in most cases—get on a plane for a face-to-face meeting and put the software in their backpacks, they face trade and customs regulations at borders.

Harvey Anderson, of Mozilla Corporation, wrestles with all of these "transactional frictions." Living in the soup of open-source software production, he wonders why there are no standards, much less open-source standards, for the routine repetitive legal elements of the raft of relationships in and out of which his company moves. "The business guys work things out and then we all have to stop for a few hours (or days, or months) while the lawyers haggle over language and documents that everyone knows will be largely obsolete and unhelpful

in short order.” The problem goes deeper than just squeezing out some inefficiencies in the drafting of documents. “Our lawyers just don’t know what we do, how a business like this works. There’s a massive DNA gap. I want lawyers who will come spend time here, getting to know how this business works, what we need and what we don’t. I have a hard time getting outside counsel to take up my offer.”

Mark Chandler, General Counsel of Cisco Systems Inc., spoke to me about how hard it is to find litigation firms that know how to think about litigation strategy in light of a raft of public and investor relations concerns. He recounted the story of Cisco’s litigation with a Chinese competitor that Cisco believed had violated its patent rights. Early in the process his outside litigators recommended filing some pre-trial motions. Chandler asked if they would win those motions. The answer from his expert litigators was no, but those motions can be used to educate the judge about the issues. Chandler’s response: “Don’t you guys get it? This lawsuit was all over the news the day it was filed. When we lose those motions the headlines the next hour read, “Cisco loses first round to competitor” and the finance guys are going berserk.” Chandler wants a litigation team that has expertise in thinking about strategy beyond the courtroom.

Even in the world where we might think that traditionally zealous legal work to protect intellectual property would be a gold-plated product, I found mismatches between what firms need from their lawyers and what they can buy. Jonathan Anschell, General Counsel at CBS Television, recounted the difficulty of finding lawyers who do not walk into every meeting on a new venture saying, “Are you sure you want to do this? It’s very risky.”

“What they don’t seem to understand,” Anschell said, “is that we have no choice but to move forward. These markets are fluid, they’re changing all the time and we can’t afford to be hanging back waiting for the uncertainties to shake out. What we need are lawyers who know how to think about how to manage risk, not avoid it.” Take what you would think would be an easy problem for a lawyer seeking to give CBS what it wants: drafting terms of use for CBS content online. Surely the answer is to put out a set of terms that locks up CBS’s ownership over its content? Not so, says Anschell:

We need lawyers who understand that in the world of new media if you lock it down, you don’t get the kind of user-generated content that is such an important component of the new media. But when we tell lawyers that, they come back with the polar opposite—a set of terms that is a user’s dream but a content-provider’s

nightmare. We need something in between these two extremes, but we find it very hard to locate the providers who know how to think about that.

What is going on here? While hardly a scientific sample, these anecdotes should surprise us. These are not small, cash-strapped businesses that are scraping the bottom of the barrel of legal talent; they are some of the biggest firms in the country with multi-million dollar legal budgets and access to the best and the brightest the legal world has to offer. Why can they not buy what they need?

In this paper I argue that the reason innovative general counsel are having difficulty finding the legal resources they are looking for is that law has not kept up with the environment in which they reside. The world has been fundamentally transformed over the last two decades. The fall of the Berlin Wall presaged political developments in the former Soviet bloc, India, and China that, by bringing nearly forty percent of the world's population out from under a communist economic regime,¹ markedly increased the number of countries participating in global markets during the 1990s. Global Internet-based technologies have rearranged production, distribution, and innovation through outsourcing and flexible global supply webs.

For the first decade of these changes, economists focused heavily on the productivity gains generated by investments in the form of physical capital, specifically computers.² Some critics of the view that the semiconductor had produced a dramatic transformation in the economy akin to the Second Industrial Revolution and the invention of electricity and the internal combustion engine, pointed out that the productivity gains of the 1990s came almost exclusively from the dramatic declines in the cost of computing power, with few productivity gains, if any, experienced outside of technology sectors and durable goods manufacturing.³

¹ LESTER THUROW, FORTUNE FAVORS THE BOLD: WHAT WE MUST DO TO BUILD A NEW AND LASTING GLOBAL PROSPERITY 27 (2003).

² See, e.g., Stephen D. Oliner & Daniel E. Sichel, *Computers and Output Growth Revisited: How Big is the Puzzle?*, 2 BROOKINGS PAPERS ON ECONOMIC ACTIVITY 273 (1994); Stephen D. Oliner & Daniel E. Sichel, *The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?*, 14 J. ECON. PERSP., Autumn 2000, at 3.

³ See, e.g., Robert J. Gordon, *Does the "New Economy" Measure Up to the Great Inventions of the Past?*, 14 J. OF ECON. PERSP., Autumn 2000, at 49. But see Stephen D. Oliner & Daniel E. Sichel, *The Resurgence of Growth in the Late 1990s: Is Information Technology the Story?*, 14 J. ECON. PERSP. Autumn 2000, at 3.

But as the second decade of the transformation progressed, it became clear that the combination of information technology with dramatic increases in the global reach of the market economy had produced not merely substantial cost-savings in production, but a new platform for economic activity. By 2006, the National Academy of Sciences recognized that the productivity gains associated with information technology arise not merely from reductions in the cost of conventional production methods, but from a reconfiguring of how business is conducted:

Structural changes arise from a reconfiguration of knowledge networks and business patterns made possible by innovations in information technology. Phenomena, such as business-to-business e-commerce and Internet retailing, are altering how firms and individuals interact, enabling greater efficiency in purchases, production processes, and inventory management. Offshore outsourcing of service production is another manifestation of structural changes made possible by new information and communication technologies.⁴

While the National Academy simultaneously noted that we have few hard measures with which to assess claims about increasing use of new business models such as off-shoring, outsourcing, and global supply chains,⁵ a picture of what the “new economy” looks like is clearly building. That picture is one of a web-enabled and globally-networked economy that is knowledge-based, transaction-driven, high velocity, highly fluid, highly differentiated, emergent—and increasingly hard to predict.

I argue in this paper that law has not kept up with these economic transformations and that the reasons are deeply structural. More precisely, they are *infrastructural*. Although we have recognized the need to build up new physical infrastructure to support economic transformation—for example, the fiber-optic cables and wireless

⁴ NAT'L RESEARCH COUNCIL OF THE NAT'L ACADEMIES, MEASURING AND SUSTAINING THE NEW ECONOMY: SOFTWARE, GROWTH AND THE FUTURE OF THE U.S. ECONOMY: A REPORT OF A SYMPOSIUM xvi-xvii (Dale W. Jorgenson & Charles W. Wessner eds., 2006).

⁵ NAT'L RESEARCH COUNCIL OF THE NAT'L ACADEMIES, MEASURING AND SUSTAINING THE NEW ECONOMY: ENHANCING PRODUCTIVITY GROWTH IN THE INFORMATION AGE 10 (Dale W. Jorgenson & Charles W. Wessner eds., 2006).

transmitters that connect Internet servers and devices—the need for new *legal infrastructure* has been almost entirely overlooked. But legal infrastructure—by which I mean the legal resources available to individuals, organizations, and regulators to help govern relationships—is critical to support and regulate the transformations of the new economy. Legal infrastructure provides important intangible connections—invisible bridges—between consumers, suppliers, investors, innovators, and regulators. It includes the formal rules produced by courts and legislators but, more importantly, it also includes the knowledge, practices, norms, and resources of legal practitioners: the solutions and advice provided by lawyers; the procedures of courts and arbitrators; the contract templates stored in public and private databanks; the shared beliefs about liability risks and optimal strategies; the accumulated wisdom and biases of experienced advocates and adjudicators, educators, and negotiators.

Collectively, these legal resources translate formal rules into actual behavior and decision making by economic actors. They feed into the critical exercise of predicting and managing the content and behavior of economic relationships. Will a new product be threatened by liability claims from consumers or former employees or current collaborators? Will uncontrolled production levels threaten global climates and future economic prosperity? How costly will it prove to comply with regulatory requirements? Are the commitments from co-venturers or investors reliable? How will gains from trade be shared? Who will have access to our ideas before we recoup our investments? Will we make it from “here”—a new product idea or strategy for expansion—to “there”—profitability and growth, prosperity and well-being? If the legal infrastructure is weak or outmoded, the journey from “here” to “there” will be slower or more costly; we may not get there at all.

When Cisco’s Mark Chandler says he has trouble finding litigators who can devise strategy informed not only by expertise in how courts behave but also how investors and the media behave, he is pointing out a missing bridge. Walker of Google and Anderson of Mozilla are complaining about the deep potholes they encounter with the contracting practices of today’s transactional lawyers—the ones who think we need fifty custom pages rather than five off-the-shelf ones to support a commercial relationship. Gaynor’s efforts at Juniper Networks to manage a global team of employees or Google’s efforts to deploy a global product are hampered by the inefficient maze of disconnected toll-roads created by a legal profession balkanized across specialties and jurisdictions. Anschell of CBS is puzzling over how to get to the equator on roads that only go to the poles. They are all struggling with outdated and crumbling legal infrastructure, poorly

adapted to providing them with the installed (legal) capital base on which they can build their innovative products, processes, and business models.

In what follows I look at how and why our legal infrastructure is outdated and ill-suited to serving the needs of the new economy. Fast-paced, global, niche-driven, and increasingly network- rather than firm-based, the economy today is poorly served by legal markets and institutions developed to meet the demands generated by an economy based on standardized mass-market manufacturing, predominantly domestic markets, and production organized within, rather than across, firm boundaries. Today's legal infrastructure, I argue, is too slow, cumbersome, and complicated (and hence too costly) to manage the explosion in the number and heterogeneity of legal relationships and regulatory settings that characterize today's global web-based entities, facing shorter product (and strategy) lifecycles and fluid business models.

Although many contemporary observers of the legal profession, viewing in particular the extraordinary stress generated by the recession of 2009, have emphasized the need for current legal practice to become more cost-effective through disaggregation or organizational restructuring (particularly downsizing) of law firms,⁶ the key problem, I claim, goes much deeper into the nature of the solutions that our legal infrastructure offers and is attributable to our excessive reliance on non-market methods of producing legal resources. These methods leave law—on the books and in practice—disconnected from the on-the-ground realities of a dynamic global economy. In the system developed over the last century, legislatures and government bureaucracies produce almost all of the legal rules and regulations governing the economy. These rules and regulations are interpreted, elaborated, and implemented by judiciaries and juries according to procedures developed by lawyers and judges. The practices and expertise of legal practitioners are honed within the bounds of an insulated profession that faces little competition, controls access and education, and determines what, where, and how legal goods and services can be offered.

⁶ See, e.g., Milton C. Regan, Jr. & Palmer T. Heenan, *Supply Chains and Porous Boundaries: The Disaggregation of Legal Services*, 78 FORDHAM L. REV. 2137 (2010); Larry Ribstein, *The Death of Big Law*, 2010 WIS. L. REV. 749 (2010); William D. Henderson & Leonard Bierman, *An Empirical Analysis of Lateral Lawyer Trends from 2000 to 2007: The Emerging Equilibrium for Corporate Law Firms*, 22 GEO. J. LEGAL ETHICS 1395 (2009).

While these may be appropriate methods for producing the political elements of law—the elements that govern the rights and processes of democratic communities—they are poorly adapted to producing the essentially economic inputs that legal infrastructure supplies to entrepreneurs and enterprises, consumers and regulators. Markets are better than lawmakers at figuring out how to tailor and manage a complex set of relationships at lower cost with higher predictability and a better fit with private and public objectives. Markets are far from perfect and need appropriate structure to coax solutions that serve not only business but also public goals. But they are essential instruments in information processing and problem-solving in dynamic and differentiated settings—the world in which we now live.

In Section II, I analyze how the new economy is transforming the economic demand for law—not merely by altering the quantity of legal inputs required to support economic activity, but more significantly, by altering the type of legal inputs required. In Section III, I introduce the concept of legal infrastructure and consider the evidence that suggests there is a substantial mismatch between what is being demanded of law and what law is actually providing. This evidence includes reports of high levels of client dissatisfaction with legal services, even among those corporate clients who can command the best the market has to offer; indications of unprecedented dislocations in legal markets wrought by the recession of 2009; and the interviews I conducted with general counsel in leading innovative firms. I then examine the dominant characteristics of modern American legal infrastructure. In Section IV, I argue that a principal reason for our legal infrastructure's failure to respond adequately to meet the demands of the new economy can be traced to an even deeper level of legal infrastructure—specifically the legal rules and institutions that govern how legal inputs are produced. These rules and institutions render the production process for law excessively public and insulated from market pressures and thereby prevent the adaptation of our legal rules. Section V provides concluding observations.

II. THE NEW ECONOMY AND ITS TRANSFORMATION OF THE ECONOMIC DEMAND FOR LAW

In a modern market democracy, law performs many functions. It secures a reduction in violence and generates social order. It protects rights and the achievement of democratic goals such as fairness, equality, and autonomy. It promotes substantive human aims such as the alleviation of suffering or sustainable energy use. And it structures

and regulates a market economy. Here I will focus on this economic function as distinct from the political or democratic functions.⁷ Even more specifically, I want to focus on how the attributes of the new global web-based market economy change what is needed from law in order for it to fulfill its economic function—promoting economic productivity, innovation, efficiency, and fair distribution.

From the vantage point of its economic function, we can think of law as a supply of relational services—economic inputs that produce value by helping to structure and regulate relationships among economic actors and between economic actors and communities. Contracts, for example, supply commitment services, establishing a basis for confidence that an economic counterpart will act in a particular way in the future, thereby supporting the incentive to cooperate with and rely on that counterpart. Property rules establish boundaries on the resources that can be secured for private use and those that must be shared with others, establishing the basis for claims to the value created by resources. Liability rules create relational claims on the resources of others to distribute losses. Securities regulations supply information and obligations that support the willingness of investors to participate in a broadly-based and largely anonymous set of transactions. Employment laws adjust for bargaining inequalities that may shift too many of the costs and too few of the benefits onto workers. Environmental regulations overcome the implications of free-rider relationships that threaten to produce too many of some goods (such as consumer products and travel) and too few of others (such as open space and clean air).

The economic demand for law is thus a *demand for legal inputs that will support the creation of value in economic relationships*. The demand may arise to secure private benefits such as supporting commitment in a strategic alliance or achieving cost-effective regulatory compliance. Or it may arise to secure public benefits such as internalizing pollution externalities or overcoming collective action

⁷ For other discussions of this distinction, see generally Gillian K. Hadfield, *The Price of Law: How the Market for Lawyers Distorts the Justice System*, 98 MICH. L. REV. 953 (2000) (exploring the economics of the market for lawyers and evaluating reasons for the high cost of legal services); Gillian K. Hadfield, *Legal Barriers to Innovation: The Growing Economic Cost of Professional Control Over Corporate Legal Markets*, 60 STAN. L. REV. 1689 (2008) (examining the economic, as opposed to social or political, implications of self-regulation of the legal market, particularly on services to corporate and other business entities); Gillian K. Hadfield & Eric Talley, *On Public Versus Private Provision of Corporate Law*, 22 J. L. ECON. & ORG. 414, 414–15 (2006) (evaluating whether it would be efficient for the economic functions of law, rather than the democratic functions, to be provided by private, rather than public, entities).

problems in maintaining quality or interoperability standards. In the former case the demand is likely to find expression through market actors. In the latter case, demand is expressed through actors who are at least in part coordinated through collective entities such as trade associations, community groups, public interest organizations, and governments.

Law is obviously not the only source of economic relational services. Commitment services, for example, are also supplied by social norms of trust and market responses to a reputation for reneging. The motivation to participate in collaborative innovative problem-solving—as Yochai Benkler, among others, has emphasized⁸—arises not only from the economic incentive of a property interest secured by patent or copyright but also from generalized reciprocity, repeat play incentives in markets or networks, fellow-feeling, curiosity, and the satisfaction obtained from peer recognition of the quality of an idea or solution. But, as researchers have discovered in the open-software setting, for example, even systems that rely heavily on non-economic incentives and norms depend on some measure of legal structure—such as the creation of a legally-recognized organization capable of defending the commitment to democratic governance and commons-based copyright licensing terms.⁹ Even with an expanded scope for exchange based on non-economic norms, a robust market economy clearly demands substantial legal structure to address the basic issues posed by economic cooperation and exchange—commitment, risk-allocation, cost and value sharing, dispute resolution, and so forth.

Transformations in the economy are transforming the economic demand for law by shifting the structure of economic relationships and, hence, the problems actors need to solve in order to achieve their private and public goals for economic cooperation and exchange.

⁸ See Yochai Benkler, *Coase's Penguins, or, Linux and the Nature of the Firm*, 112 YALE L. J. 369, 375–80 (2002) [hereinafter Benkler, *Coase's Penguins*]; Yochai Benkler, *Sharing Nicely: On Shareable Goods and The Emergence of Sharing as a Modality of Economic Production*, 114 YALE L. J. 273, 276, 278–81, 321–27 (2004) [hereinafter Benkler, *Sharing Nicely*]; Yochai Benkler, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* 91–99 (2006). See also Steven A. Hetcher, *Hume's Penguin, or, Yochai Benkler and the Nature of Peer Production*, 11 VAND. J. ENT. & TECH. L. 963, 963, 998–1000 (2009).

⁹ For a discussion, see Siobhan O'Mahony, *Guarding the Commons: How Community Managed Software Projects Protect Their Work*, 32 RES. POL. 1179 (2003); Siobhan O'Mahony & Beth Bechky, *Boundary Organizations: Enabling Collaboration Among Unexpected Allies*, 53 ADMIN. SCI. Q. 422 (2008).

These transformations are best seen if we compare two stylized pictures: the prototypical “old” economy firm and the prototypical “new” economy firm. I do not claim that all firms ever have or ever will match these stylized pictures; rather, my claim is that by focusing on these stylizations, we can see more clearly how what the new economy needs from law differs from what the old economy needed. I turn to these stylized pictures next.

A. WHAT’S NEW ABOUT THE NEW ECONOMY?¹⁰

Start with the old economy. The old economy is the managed economy¹¹ that emerged at the turn of the last century, spurred by the technological advances of electricity, national railroads and telegraph systems.¹² It is characterized, in Alfred Chandler’s account, by the large managerial enterprise engaged in mass production on a national level.¹³ This is an economy marked by standardization and massive returns to scale in production, the world of General Motors, U.S. Steel, AT&T, and, eventually, IBM. It is an economy of consolidation and vertical integration, the absorption of economic activity in entire industries within the walls of a handful of, maybe even a single, corporation. It is an economy built on the establishment of large-scale capital markets and the separation of ownership and control. Though engaged in international trade, it is nonetheless a national economy. In large measure it is governed at the federal level by agencies and

¹⁰ There is a diverse literature across economics and sociology that attempts to capture the elements of the “new” economy. For other discussions, see David Audretsch & A. Roy Thurik, *What’s New about the New Economy? Sources of Growth in the Managed and Entrepreneurial Economies*, 10 *INDUST. & CORP. CHANGE* 267 (2001); Timothy J. Sturgeon, *Modular Production Networks: A New American Model of Industrial Organization*, 11 *INDUST. & CORP. CHANGE* 451 (2002); Richard N. Langlois, *The Vanishing Hand: The Changing Dynamics of Industrial Capitalism*, 12 *INDUST. & ORG. CHANGE* 351 (2003); Naomi R. Lamoreaux, Daniel M. G. Raff & Peter Temin, *Beyond Markets and Hierarchies: Toward a New Synthesis of American Business History*, 108 *THE AMERICAN HISTORICAL REVIEW* 404 (2003); Charles F. Sabel & Jonathan Zeitlin, *Neither Modularity nor Relational Contracting: Inter-Firm Collaboration in the New Economy*, 5 *ENTER. & SOC’Y* 388 (2004).

¹¹ Audretsch & Thurik, *supra* note 10, at 267.

¹² See ALFRED D. CHANDLER JR., *THE VISIBLE HAND: THE MANAGERIAL REVOLUTION IN AMERICAN BUSINESS* 53–58 (1977).

¹³ *Id.* at 486. See also ALFRED D. CHANDLER JR., *SCALE AND SCOPE: THE DYNAMICS OF INDUSTRIAL CAPITALISM* (1990) (examining the growth of “managerial capitalism” globally).

statutes beginning with the Interstate Commerce Commission (1887) and the Sherman Act (1890), aimed principally at containing the abuse of monopoly power.

The prototypical old economy enterprise is a large, integrated firm—schematically we can represent it as a box; as economists we represent it as a black box. Inputs from suppliers such as raw materials, intermediate goods, labor, and financial capital come across the boundary of the firm, are transformed internally via a production process into goods and services, and then sold across the boundary of the firm to buyers. As captured by the work of Ronald Coase and Oliver Williamson, transactions that cross the boundary of the firm are managed by contract; those within the firm are managed by hierarchical fiat and managerial discretion.¹⁴ The firm effectively owns and controls the entire production process taking place within its walls: research and development and product innovation occur within the firm; decisions about how much to invest in technology and how to allocate capital and labor to different aspects of production occur within the firm; distribution and sales mechanisms are controlled within the firm. Moreover, there is scale and stability in the firm's choices about the optimal allocation of inputs, the optimal level of technology, and the optimal pricing and distribution of products. We can talk meaningfully about *the* production process, output, and pricing decisions of the firm, treating each as stable over a significant period of time. Technological change is capitalized in the choice of a durable production process. Regulation of the firm's activities in the old economy is largely exercised at the boundaries of the firm—limiting size, taxing output, ensuring competitive or fair terms in employment and sales contracts, controlling cross-border flows of physical goods, and so on. The representative firms are national manufacturers like GM and DuPont, producing and selling the great majority of their output domestically.

In contrast, the “new economy” begins with twin structural changes that have made economies fundamentally global. The first is the extension of world markets into the former communist or otherwise closed economies of the Soviet Bloc and Asia, notably China and India. Political changes culminating in the fall of the Berlin Wall in 1989, India's economic reforms in the wake of near-bankruptcy in 1991, and China's fifteen year progression to membership in the

¹⁴ See, e.g., R.H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937); OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* 3 (1975); Oliver E. Williamson, *Economics and Organization: A Primer*, 38 *CAL. MGMT. REV.* 131 (1996).

World Trade Organization in 2001 dramatically increased the scale of world trade and economic activity. As Lester Thurow noted, until the transformations of the last two decades, nearly 40% of the world's population lived under a communist economic regime.¹⁵ The impact of opening markets continues to accelerate. Domestically, imports and exports have almost tripled as a share of U.S. GDP since 1970, from a little over 10% to almost a third of all goods and services purchased or produced in the U.S.¹⁶ Worldwide, total trade has increased significantly: the average share of country GDP attributable to exclusively domestic production was nearly cut in half in just a seven year period (1998 to 2005), from 25% to 14%.¹⁷ In the same time period, total foreign direct investment globally grew by 22%.¹⁸ The number of treaties almost doubled, from 292 to 583.¹⁹

The second structural change that transformed national into global economies was the explosion of information technology, and specifically the Internet. Worldwide, Internet users as a percentage of domestic population grew from an average of 7% in 1998 to 29% in 2005.²⁰ Even more striking, in the same time span, the percentage of countries²¹ with Internet usage rates below 10% fell from 70% to 25%.²² In 1998, usage rates higher than 30% were rare (5% of countries)—the top rate was 40% (Norway).²³ By 2005 usage rates above 30% were common (40% of countries) and the top rate was 76%

¹⁵ Thurow, *supra* note 1, at 27.

¹⁶ BUREAU OF ECON. ANALYSIS, NAT'L ECONOMIC ACCOUNTS, NAT'L INCOME AND PRODUCTS ACCOUNTS (NIPA) TABLE 1.1.10, <http://www.bea.gov/national/nipaweb/TableView.asp?SelectedTable=14&ViewSeries=NO&Java=no&Request3Place=N&3Place=N&FromView=YES&Freq=Year&FirstYear=1970&LastYear=2009&3Place=N&Update=Update&JavaBox=no#Mid> (last revised Jan. 27, 2012).

¹⁷ *The Globalization Index*, 163 FOREIGN POLICY 68 (2007) (These data are based on 72 countries representing 97% of world gross domestic product and 88% of world population).

¹⁸ *Id.* Data for 1998 were adjusted to 2005 dollars.

¹⁹ *Id.*

²⁰ *Id.*

²¹ The Foreign Policy globalization data for 1998 is based on 62 countries, accounting for approximately 82% of world population.

²² *Id.*

²³ *Id.*

(Sweden).²⁴ (Usage in the United States grew from 30% in 1998 to 66% in 2005.)²⁵

These structural changes, collectively described as “globalization,” are transforming the organization of innovation, production, and distribution in fundamental ways. The Internet is not merely a means of communicating; its “Web 2.0” version is also a platform for organizing work.²⁶ With shared databases; videoconferencing; networking sites with upload capabilities for video, documents, and images; peer-to-peer networks; collaborative tools such as wikis; and virtual meeting spaces such as chat rooms and online meeting facilities, the economy is becoming increasingly Internet-based, not merely in terms of transactions, such as sales, but more fundamentally in terms of how work is organized. Thus the globalization we are witnessing is not just an expansion in conventionally conceived international trade in goods; it is a restructuring of production processes across national boundaries. Employees and contractors may be located anywhere and work together in a virtual space. Drawing on cloud computing the computer infrastructure of a corporation can be located anywhere. Services and goods connected to local production and distribution systems, can be delivered anywhere.

In the new economy, the prototypical economic enterprise is no longer a box; it is a network. Its boundaries are increasingly indistinct. As a consequence, production and distribution are much more heavily influenced by network externalities than at the old economy firm, where the economies of scale and scope dominated. In the new economy enterprise, the transaction, rather than the firm, is primary²⁷—and not merely, as Ronald Coase and Oliver Williamson first emphasized, to determine the boundaries and behavior of the

²⁴ *Id.*

²⁵ *Id.*

²⁶ Tim O’Reilly, publisher of O’Reilly Media and sponsor of what many think was the first conference under the banner of “Web 2.0” defines it as “the business revolution in the computer industry caused by the move to the internet as a platform.” Tim O’Reilly, *Web 2.0 Compact Definition: Trying Again*, O’REILLY RADAR (Dec. 10, 2006), <http://radar.oreilly.com/archives/2006/12/web-20-compact.html>. It does not involve any new technology for connection but rather a shift in how the technology is deployed.

²⁷ Luigi Zingales, *In Search of New Foundations*, 55 J. FIN. 1623 (2000); Richard N. Langlois, *The Vanishing Hand: The Changing Dynamics of Industrial Capitalism*, 12 INDUS. & CORP. CHANGE 351 (2003).

firm.²⁸ Yochai Benkler and Don Tapscott, with their accounts of citizen-reporters updating on Slashdot or YouTube, NASA click-workers mapping craters on the moon, thousands of independent software engineers writing code, and far-flung geologists collectively discovering gold, have both painted vivid portraits of the capacity in a web-based economy to break productive activity down into potentially minute components or transactions and then network those components to produce economic output.²⁹ These transactions might be organized by and between identifiable firms, but they might also generate a completely independent, self-organizing, and emergent entity. Similarly, the characteristics of what is produced by the new economy enterprise can be emergent (bottom-up) rather than designed (top-down).³⁰ The characteristics of social networks demonstrate this—Facebook and YouTube have characteristics invented by their users, not their planners.

The new economy enterprise is also heavily focused on the production, exchange, and control of information as a good in itself, not merely as a parameter of production choices. The introduction of information technology has accelerated the reach and impact of the transformation in production methods spurred initially by the advent of “lean manufacturing” and specifically the importance of information flows between engineers, line personnel, sales staff, and so on to reduce down-time, decrease required inventories, and improve coordination.³¹ Today these methods are seen in deeply integrated electronic relationships in a wide variety of industries,

²⁸ R.H. Coase, *The Theory of the Firm*, 4 *ECONOMICA* 386 (1937); OLIVER WILLIAMSON, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* (1975).

²⁹ Benkler, *Coase's Penguins*, *supra* note 8; Benkler, *Sharing Nicely*, *supra* note 8; BENKLER, *THE WEALTH OF NETWORKS*, *supra* note 8; DON TAPSCOTT & ANTHONY D. WILLIAMS, *WIKINOMICS: HOW MASS COLLABORATION CHANGES EVERYTHING* (2006). *See also* DON TAPSCOTT & ART CRANSTON, *PARADIGM SHIFT: THE NEW PROMISE OF INFORMATION TECHNOLOGY* (1993); DON TAPSCOTT, *THE DIGITAL ECONOMY: PROMISE AND PERIL IN THE AGE OF NETWORKED INTELLIGENCE* (1997).

³⁰ For discussions of Web 2.0, user-led and open innovation, see ERIC VON HIPPEL, *DEMOCRATIZING INNOVATION* (2005), HENRY W. CHESBROUGH, *OPEN INNOVATION: THE NEW IMPERATIVE FOR CREATING AND PROFITING FROM TECHNOLOGY* (2005), JOHN HAGEL III & JOHN SEELY BROWN, *THE ONLY SUSTAINABLE EDGE: WHY BUSINESS STRATEGY DEPENDS ON PRODUCTIVE FRICTION AND DYNAMIC SPECIALIZATION* (2005).

³¹ JAMES P. WOMACK, DANIEL T. JONES & DANIEL ROOS, *THE MACHINE THAT CHANGED THE WORLD: THE STORY OF LEAN PRODUCTION* vii, 115 (1990).

many of which cross the boundaries of the firm.³² With deep inter-firm integration of information systems comes deep inter-firm integration in innovation, production, and distribution.³³

Unlike the stable old economy firm—the one that conventional economics can safely treat as having chosen a production process, output level, and price—the new economy firm is fundamentally flexible and dynamic. It has to be to respond to a high velocity and high novelty environment. Speed of response and, more generally, change across markets is partly a result of how quickly information travels about the shortcomings of a new product or the potential for a different partner, business model, or production process. It is also a result of the expanded stage on which competition takes place—with more minds competing to solve the same problem or differentiate products. Some of the speed-up in work is attributable to changes in expectations about how quickly tasks can be completed—the bane of the beeper and the Blackberry. Some is due to improved logistics in shipment and delivery, which allow for shorter times to market.³⁴ Some is due to the modular transaction-driven organization of economic activity, which implies that there is greater potential for a piece of a production process or distribution system to shift without requiring that the economics justify a change in the whole. And technology makes speed possible and sometimes unavoidable: Internet connections are always on. Somewhere the markets are open. Bloggers never sleep. As a result, the new economy firm is called upon to constantly evaluate and respond.

The new economy enterprise is also involved in a much more highly differentiated set of products, processes, and relationships than the old economy firm. Mass-market consumer goods are still with us

³² The phenomenal success of Walmart, for example, is significantly attributable to the information systems Walmart implemented to exchange information read from check-out scanners, and soon smart shelves and goods with RFID tags, directly between retailer and supplier. Justin R. Watkins, Comment, *Always Low Prices, Always at a Cost: A Call to Arms Against the Walmartization of America*, 40 J. MARSHALL L. REV. 267, 273–74 (2006) (citing JOHN DICKER, *THE UNITED STATES OF WAL-MART* (2005) and DON SODERQUIST, *THE WALMART WAY* (2005)) (explaining how “Walmart, Inc.’s tremendous success in the retail and grocery markets has as much to do with its use of technology as its maniacal devotion to everyday low prices.”).

³³ For a discussion, see Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration*, 209 COL. L. REV. 431 (2009).

³⁴ MARC LEVINSON, *THE BOX: HOW THE SHIPPING CONTAINER MADE THE WORLD SMALLER AND THE WORLD ECONOMY BIGGER* (2006).

but so too now is the “long tail” of niche markets,³⁵ facilitated by global online markets and lower-cost logistics and delivery systems. Product heterogeneity also results from the global diversity of buyers. On the supply side, increasing returns to knowledge generates heterogeneity among economic actors: specialization becomes indispensable as the level of expertise needed to comprehend an aspect of a technology, business environment, or transaction increases. This also means that accomplishing economic tasks often requires assembling a team of contributors with different areas of expertise³⁶ and relationships in the new economy frequently involve parties with substantially different levels of specialized knowledge. Vertical hierarchies in the organization of work may be collapsing, but horizontal differentiation is building.

In summary, where the prototypical old economy enterprise is fixed and stable—with identifiable boundaries—the prototypical new economy enterprise is dynamic and fluid, its boundaries indistinct. The old economy firm trades products across its boundaries—inputs from suppliers, outputs to buyers—and is regulated at its boundaries. The new economy firm is deeply networked and highly integrated at the transaction level with a web of suppliers, consumers, regulators, investors, researchers, and so on. The old economy firm is domestic. The new economy firm is global. The old economy firm makes its decisions in a relatively stable and insulated environment, with uncertainty coming in the form of exogenous shocks. The new economy enterprise makes its decisions in a constantly changing and open environment; uncertainty is pervasive. The old economy firm is planned; the new economy enterprise is reactive and emergent. The old economy firm is a box; the new economy firm is a network. The old economy firm is GM; the new economy enterprise is Google.

B. HOW THE NEW ECONOMY IS TRANSFORMING LEGAL DEMAND

The changes associated with the new economy are transforming the demand for law. I mean by this more than a straightforward increase in the volume of legal work as a result of the expansion of the

³⁵ CHRIS ANDERSON, *THE LONG TAIL: WHY THE FUTURE OF BUSINESS IS SELLING LESS OF MORE* (2004).

³⁶ For an analysis of this implication of technological progress, see Benjamin F. Jones, *The Burden of Knowledge and the ‘Death of the Renaissance Man’: Is Innovation Getting Harder?*, 76 *REV. OF ECON. STUD.* 283 (2009).

scale and complexity of the global market economy.³⁷ What the new economy enterprise needs from law is not just more of what the old economy enterprise needed; it needs things that are different, such as less complex and costly ways to secure a complex fluid relationship.³⁸ When I speak of the transformation of legal demand, then, I am speaking of the ways in which the services law is called upon to provide are altered by transformations in the underlying relationships law structures. It is in this sense that the new economy demands not merely more but different from law, at both the level of the transaction and the level of the market. In this section I identify several distinctive features of the economic demand for law in the new economy.

1. INCREASED FIRM BOUNDARY-CROSSING

The relationships of the new economy cross the boundary of the firm far more frequently than was the case in the old economy.³⁹ This transforms the role of contracting. Although I know of no formal efforts to count this, there is probably an absolute increase in the number of contracts when functions within the firm are disaggregated

³⁷ See Marc Galanter, *Planet of the APs: Reflections on the Scale of Law and its Users*, 53 BUFF. L. REV. 1369 (2006). Galanter estimates that between 1978 and 2003, expenditures on legal services (including in-house and government services) grew more than four-fold, from approximately 0.5% of GDP to approximately 2.25%. Gross receipts of U.S. law firms increased 649% from \$22.15 billion in 1967 to \$166.1 billion in 2002 (both figures in 2000 dollars.). *Id.* at 1378–79.

³⁸ For related work examining the impact of decentralization in economic relationships on the contractual relationships of the new economy, see Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Contracting for Innovation: Vertical Disintegration and Interfirm Collaboration*, 109 COLUM. L. REV. 431 (2009) [hereinafter Gilson, Sabel & Scott, *Contracting for Innovation*]; Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Braiding: The Interaction of Formal and Informal Contracting in Theory, Practice and Doctrine* (Columbia Law & Economics Working Paper, Jan. 11, 2010) [hereinafter Gilson, Sabel & Scott, *Braiding*], available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1535575.

³⁹ See Gilson, Sabel & Scott, *Contracting for Innovation*, *supra* note 38, at 494–501; Bengt Holmstrom & John Roberts, *The Boundaries of the Firm Revisited*, 12 J. ECON. PERSP. AUTUMN 1998 at 73, 80, 84–86 (1998) (noting that “there seems to be something of a trend today toward disintegration, outsourcing, contracting out, and dealing through the market rather than bringing everything under the umbrella of the organization” and providing a number of examples); ANNA DUBOIS, ORGANIZING INDUSTRIAL ACTIVITIES ACROSS BORDERS 4 (1998) (observing that “[t]here appears to be some consensus that there is an increasing move towards ‘buy’ rather than ‘make’”).

and contracted-out and as the number of entities with which the firm collaborates increases. But even if the count of contracts is unchanged—if every outsourcing contract in the new economy enterprise, for example, is replacing an employment contract in the old economy firm—the complexity of the contracting problem and the demand for contracting services clearly increases dramatically when transactions are shifted across the firm boundary. Employment contracts are relatively thin and standardized, addressing largely risk-insulated compensation issues but leaving much of the authority to control the employee's day-to-day activity to the employer's discretion. The commercial relationships that substitute for employment relationships when economic activity shifts across the firm boundary, in comparison, are likely to be far less standardized and to involve more extensive attention to the evolution of behavior and information exchange. They are likely to attempt to coordinate expressly among transactions that within the firm are coordinated through managerial discretion. As Ron Gilson, Chuck Sabel, and Bob Scott have emphasized, they are likely to attend to agreements about goals and information-sharing—as opposed to express behavioral constraints⁴⁰—as they attempt to structure a fluid and dynamic collaborative relationship.⁴¹ All of this entails a deepened demand for the legal inputs that structure contractual relationships.

2. INCREASED JURISDICTIONAL BOUNDARY-CROSSING

The demand for contracting inputs is further deepened when many more relationships also cross jurisdictional boundaries. Although the managerial economy of the past century also involved extensive international trade in manufacturing inputs and final goods, the globalization of the new economy significantly increases the extent to which economic activity flows across borders, often in intangible ways. Jurisdiction-crossing relationships are generally subject to greater uncertainty in enforcement under current institutions and methods, such as the determination of which laws apply to the contract, the diversity in legal procedures in different legal systems, and the complex rules governing when foreign orders (to seize assets to enforce a judgment, for example) come into play. Moreover, cross-border transactions acquire complex, hard-to-judge legal elements when they involve extensive exchanges of information and

⁴⁰ Gilson, Sabel & Scott, *Contracting for Innovation*, *supra* note 38.

⁴¹ *Id.*

collaboration on product development and integrated logistics. More complex legal questions make variation in the legal procedures and principles in different legal systems a source of greater heterogeneity and uncertainty in predicting the content of legal obligations.

Jurisdictional boundary crossing also increases the complexity and heterogeneity of regulatory relationships. Web-based collaboration among employees scattered across the globe implicates employment and tax regulation by multiple jurisdictions in hard-to-disentangle ways, as well as trade and immigration issues when team members travel to meet in person. Globally available products and services delivered over the internet—such as YouTube, Firefox, Google, or eTrade—simultaneously enter multiple regulatory environments governing consumer transactions, advertising, intellectual property, privacy and so on. Databases that collect and providers that host data from several countries, located in servers in several (perhaps other) countries, and accessed by users in several (perhaps still other) countries are subject to numerous, often conflicting database regulations.

3. MORE PERVASIVE AND COMPLEX TRANSACTIONS IN INFORMATION

In the new economy information is a prime object of economic transactions, but transactions in information are especially difficult to structure. We have had a patent and copyright system in place for a long time to create markets in information embodied in inventions and creative outputs. But in the new economy much of the information economic actors value is intangible, process-related, or difficult to capture in a meaningful time frame in patentable or copyrightable subject matter. Much of the information traded in the new economy is thus managed relationally, across firm boundaries, using secrecy, and trust, tort, or trade secret liability (as opposed to property) to create the potential for trade and contracts to exchange information for value. Arrow's paradox captures the key contracting challenge in such an environment: it is very difficult to price information prior to disclosure and after disclosure it is very hard to make someone pay for the use of the information in the absence of external protections.⁴² There is therefore a pervasive demand for legal solutions that can protect and price information. Massive data capture and processing technology—think Google—also raises the legal

⁴² Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 609, 615 (National Bureau of Economic Research ed., 1962).

challenge of structuring micro-transactions in information: this is a key component of the privacy concerns generated when entities such as Facebook extract commercially-valuable information from the aggregation and correlation of millions of users' every mouse click. And even when information transfer is not the direct object of a transaction, pervasive information asymmetries in an information-dense environment raise pervasive contract design challenges. The scope of these asymmetries is multiplied many-fold as transactions change context across both firm and jurisdictional boundaries.

4. RAPID DEPRECIATION AND OBSOLESCENCE OF LEGAL SOLUTIONS

The higher velocity of the new economy implies that particular legal solutions have a higher rate of depreciation and obsolescence. Rapid technological change and more fluid transactional relationships that are responsive to shifts in competitive advantage on a global scale can make a particular contract, compliance or regulatory strategy outdated within a shorter period of time than was the case in the more stable and slower-moving managerial economy. This expands the demand for legal inputs as the number of points at which legal analysis and problem-solving are potentially required increases. It also shifts the relative value of adaptable as opposed to fixed solutions, calling for greater emphasis on dynamic as opposed to static legal analysis.

5. INCREASED DIFFERENTIATION OF DEMAND

The greater degree of heterogeneity in the new economy also implies a more differentiated demand for legal solutions—although not necessarily a demand for more differentiated legal documents or regulations. This arises from the customization of products or services themselves, higher rates of experimentation with different types of relationships, and the heterogeneity of legal settings encountered by global shifting relationships.

6. LOWER TOLERANCE FOR LEGAL TRANSACTION COSTS

Even old economy firms can find legal transaction costs to be too high relative to the value delivered. But new economy firms are likely to have even lower tolerance for legal transaction costs because of multiple pressures. To begin with, enhanced global competition can decrease profit margins. Moreover, the small-scale startups and entrepreneurs who play a greater role in the innovation economy face

greater limits on their ability to absorb legal costs. Structurally, the fact that new economy firms are in more settings that require contractual and regulatory compliance analysis and creativity, with greater heterogeneity and more rapid depreciation of particular solutions, implies effectively that firms need more but can afford to pay less. Compare, for example, the tolerance for contract drafting costs that attends the design of a sales contract or a human resources employment policy when these solutions can be standardized, implemented firm wide, and expected to work effectively for a long period of time, with the tolerance for those same costs when there is no such thing as a standard product, employee teams are spread across ten countries, and nothing is expected to remain the same for very long.

7. GREATER DEMAND FOR INTEGRATION OF LEGAL AND BUSINESS EXPERTISE

As the number, complexity, and heterogeneity of legal relationships in which a firm is involved increases, so too does the value of legal inputs that are expertly informed about the firm's business goals and environment. In an economy with high levels of standardization, we can expect legal solutions to effectively capitalize knowledge about the business or regulatory considerations that, for example, a sales contract or employment policy needs to address. Individual lawyers do not need to understand as much about why the standard approach includes this clause or that practice. But the lawyer who is designing a contract or practice for a novel or niche setting needs to understand more deeply the relationship between a particular solution and the environment in which the client firm or regulator is operating. Similarly, the lawyer who is trying to predict how legal relationships will evolve over time or how they will interact with other legal relationships or legal institutions (such as courts or regulators) requires, in a more complex legal environment, greater knowledge of the economic environment, because the conventional judgments that are capitalized in legal norms and cultures will be less accurate.

III. MEETING LEGAL DEMAND: THE INADEQUACY OF OUR LEGAL INFRASTRUCTURE

The legal materials available to meet the economic demand for law include the set of legal rules and principles in a given setting—the forms of property that are recognized and protected against theft or

unauthorized use, the regulatory limits on economic activity, the elements required to create a binding contract, and so on—but they go far beyond the set of laws on the books. They include, for example:

- The formal and informal elements of procedure for invoking or challenging the enforcement of rules—such as civil procedure and evidence codes, as they are in fact implemented on the ground.
- The norms and practices of legal advising, and the costs and quality of legal advising.
- The standard forms and collected contract templates available in legal databases, and the procedures and rules that govern access to those databases.
- The accumulated conventional wisdom about regulatory and dispute-resolution strategies.
- The stock of knowledge accumulated by legal practitioners through formal education, trade publications, conferences, patterns of training and expertise, and anecdotal experiences.

These features of the legal environment influence the cost and efficacy of any particular legal solution that might appear on the books, and they affect the likelihood of learning about and deploying such a solution. They are inputs to an economic output, namely the structuring of a particular economic relationship.

The set of materials or inputs that are deployed in developing solutions to legal problems make up what I call our *legal infrastructure*. This infrastructure provides the base on which the new economy enterprise, and its regulators, must build solutions to the challenges of achieving the public and private goals of economic activity in a rapidly changing world. In this section I first develop the concept of legal infrastructure and characterize the dominant elements of our legal infrastructure. I then defend the claim—drawing on some empirical evidence, but mostly theoretical argument—that our existing legal infrastructure is inadequate to meet the transformed legal demands of the new economy.

A. THE CONCEPT OF LEGAL INFRASTRUCTURE

Like other uses of the concept of infrastructure, I intend by legal infrastructure to refer to a form of socially available capital that produces a stream of services at a cost lower than the cost of producing the asset itself. By socially available, I mean that it is (more or less) widely available to participants in a society, not merely to those actors who produce the asset. The boilerplate that accumulates in repeated contracts and is picked up by lawyers drafting instruments for their clients, for example, is an element of legal infrastructure. The more widely available that boilerplate is, and the better adapted it is to achieving the goals of later users, the more valuable it is as infrastructure. The experience an attorney accumulates in negotiating regulatory positions with a federal agency is also an element of legal infrastructure, as are the professional norms for how best to manage a client seeking to achieve particular goals. Differences in legal infrastructure are evident as we move around the globe—lawyers in Germany, for example, are likely to draw up shorter contracts than American lawyers for a similar transaction; in doing so they draw on differences in accumulated documents, experiences, practices, and procedures.⁴³

Note that this notion of legal infrastructure goes beyond the content of formal legal rules to include the various things produced privately by the legal effort exerted by lawyers, legal publishers, legal educators, and legal consumers. It also includes the more informal products of formal lawmakers such as regulators, legislators, and courts. *Legal infrastructure is thus the accumulated stock of what legal actors—broadly defined—produce.* It is largely a by-product of performing legal work for a particular economic relationship. Individualized work becomes capitalized in a durable mechanism—shared experience, documents, patterns of procedure, and so on—and thereby socially available in the sense that it contributes value to the structuring of future, often completely unrelated, relationships. Legal inputs are thus intermediate goods: they are the output of the legal sector and used as inputs in other sectors.

The concept of infrastructure here is related to, but distinct from, the concept of “social capital.” Sociologists and political scientists have varying definitions of “social capital” but they tend to converge on the idea that there are resources embedded in social relationships and

⁴³ See Claire A. Hill & Christopher King, *How Do German Contracts Do as Much with Fewer Words?*, 79 CHI.-KENT L. REV. 889, 889 (2004).

networks—concrete resources, such as information about job opportunities, and intangible resources, such as trust and norms of reciprocity—that support the achievement of individual or cooperative objectives.⁴⁴ I conceive of legal infrastructure as a set of resources that can perform a similar function—supplying contractual obligations to support reliance, for example—but distinguish it from the set of relational resources derived from extra-legal norms and materials. In practice, it will of course often be difficult to discern the boundary between legal and extra-legal resources—between trust and contract for example.⁴⁵ But there is a distinction and it is helpful to maintain it in order to focus on the resources generated by a recognizable legal system. These too might be informal norms—an informal norm of compliance with a contract obligation even when the threat of formal court enforcement is not credible, for example—but they are clearly linked to the distinguishing features of what we call law.

Like the classical forms of physical infrastructure—highways, railways, electric power grids, telephone lines—and the critical infrastructure of the information economy—the Internet—legal infrastructure “lies beneath” the economic relationships it helps to structure. It also displays most of the distinctive features of infrastructure:

- *Embeddedness.* Infrastructure is sunk into, or inside of, other structures, social arrangements and technologies.
- *Transparency.* Infrastructure is transparent to use, in the sense that it does not have to be reinvented each time or assembled for each task, but invisibly supports those tasks.

⁴⁴ For discussions of the concept of social capital and its development, see Pierre Bourdieu, *The Forms of Capital*, in HANDBOOK OF THEORY AND RESEARCH FOR THE SOCIOLOGY OF EDUCATION 241, 248 (John G. Richardson ed., 1985); James S. Coleman, *Social Capital in the Creation of Human Capital*, 94 AMER. J. SOC. S95, S98, S101 (1988); Alejandro Portes, *Social Capital: Its Origins and Applications in Modern Sociology*, 24 ANN. REV. OF SOC. 1 (1998); Robert Putnam, *The Prosperous Community: Social Capital and Public Life*, 13 AM. PROSPECT 35 (1993); ROBERT D. PUTNAM, BOWLING ALONE: THE COLLAPSE AND REVIVAL OF AMERICAN COMMUNITY (2000).

⁴⁵ And indeed as Ron Gilson, Chuck Sabel and, Bob Scott have recently argued, the two may be deeply interdependent. See Gilson, Sabel & Scott, *Braiding*, *supra* note 38.

- *Reach or scope.* This may be either spatial or temporal—infrastructure has reach beyond a single event or one-site practice.
- *Learned as part of membership.* The taken-for-grantedness of artifacts and organizational arrangements is a *sine qua non* of membership in a community of practice. Strangers and outsiders encounter infrastructure as a target object to be learned about. New participants acquire a naturalized familiarity with its objects as they become members.
- *Links with conventions of practice.* Infrastructure both shapes and is shaped by the conventions of a community of practice.
- *Embodiment of standards.* Modified by scope and often by conflicting conventions, infrastructure takes on transparency by plugging into other infrastructures and tools in a standardized fashion.
- *Built on an installed base.* Infrastructure does not grow *de novo*; it wrestles with the inertia of the installed base and inherent strengths and limitations from that base.
- *Becomes visible upon breakdown.* The normally invisible quality of working infrastructure becomes visible when it breaks: the server is down, the bridge washes out, there is a power blackout. Even when there are back-up mechanisms or procedures, their existence further highlights the now-visible infrastructure.⁴⁶

⁴⁶ Susan Leigh Star & Karen Ruhleder, *Steps Toward an Ecology of Infrastructure: Design and Access for Large Information Spaces*, 7 INFO. SYS. RES. 111 (1996).

Unlike classical physical infrastructure such as railways, however, legal infrastructure is not an engineering project that can be designed and built by a public or quasi-public entity to meet projected demand. It has some engineered elements—most notably, the formal laws and regulations enacted by legislatures and agencies, but these engineered elements are only a small part of what is fundamentally an organic and emergent entity.⁴⁷ Most of what constitutes the set of legal materials available to support an economic relationship forming at a point in time is the uncoordinated product of myriad legal actions—contracts drafted, legal arguments made, decisions reached, strategies tested—taken by a wide diversity of actors at an earlier point in time.

Using the concept of “infrastructure” to characterize the wide variety of tangible and intangible inputs that law and legal actors provide to support the creation of value in economic relationships allows us to draw on the visual imagery of a publicly provided network that connects individuals, entities, and systems in order to facilitate their interaction. Highway systems, telephone cables, the Internet—these familiar components of infrastructure enable *A* to deal with *B*. A society with good infrastructure provides this backbone for interaction as a public or quasi-public good (possibly charging access fees or tolls) to the economy at large. Similarly, the legal infrastructure that exists at any given time in a society provides potential legal connections that can facilitate or increase the value of economic relationships between members of the society. A robust legal infrastructure is one that is well-adapted to meeting the needs of the economic relationships actors seek to form, providing these relational services with cost-effective levels of quality.

B. MISSING BRIDGES AND ROADS: THE PROBLEMS OF LEGAL INFRASTRUCTURE

One of the characteristic features of infrastructure is that it is largely invisible, until it breaks down—at which point it rapidly shifts to figure from ground: the bridge collapses, the lights go out, the garbage collectors go on strike.⁴⁸ Here what we see is the absence of something we have come to take for granted. Documenting shortcomings in existing infrastructure—not the bridge that goes out

⁴⁷ Newer forms of infrastructure, notably the Internet, also display this organic and emergent quality. For example, analysts of cyberinfrastructure increasingly emphasize the relational quality and development of this infrastructure. See *id.* at 112–13.

⁴⁸ *Id.*

but the roadway that was never built—is much more difficult; even more so when the nature of the connection is as yet uninvented, maybe even as yet unimagined. Prior to the deregulation of the airline industry, for example, no one had predicted the hub and spoke system that quickly emerged after deregulation.⁴⁹ No one before 1978 would have been able to demonstrate empirically that what was missing in air transportation infrastructure were the elements of a hub and spoke system. Similarly, no one can predict what will replace Google searches five years from now but we will not be at all surprised to discover that something will and that there will be elements of cyber-infrastructure that are now missing or underdeveloped.

It is thus a tall task to demonstrate that our existing legal infrastructure is inadequate and failing to meet the demands of the new economy. Certainly there are no, and probably can be no, formal empirical tests of this proposition—just as there are no tests of the alternative hypothesis (that many participants in the legal system likely maintain) that the system is responding well, as well as can be expected, to demand. The evidence we have is largely anecdotal and, ultimately, rests on appeals to theory. Those who believe the system is working well emphasize the (uncontested) fact that our best lawyers are very smart, work hard, and can be hired at fees that our most successful corporations can afford. They appeal to the competitiveness of legal markets to support the claim that if there are legal inputs that new economy enterprises need to support their endeavors then these legal markets will produce it. My response in this section is, first, to point to the partial and anecdotal evidence we have of gaps between demand and supply. I then, in the following sections, shift to my primary focus to the theoretical reasons we have for believing that these gaps exist and are significant.

C. DISSATISFACTION WITH LEGAL MARKETS

Grumbling about law and lawyers is nothing new. But as Marc Galanter has documented, although lawyers have long been vilified, dissatisfaction with lawyers and the legal system became widespread

⁴⁹ See Elizabeth E. Bailey, *Air-Transportation Deregulation*, in *BETTER LIVING THROUGH ECONOMICS* 196 (John. J. Siegfried, ed., 2010) (noting that “almost immediate transformation of airline networks from linear point-to-point systems created by the CABG into hub-and-spoke networks” was an “unanticipated aspect of airline deregulation”). Thanks to Preston McAfee for this example.

and increasingly hostile beginning in the 1970s and 1980s.⁵⁰ Much of this dissatisfaction is found among those who are (or perceive themselves to be) the targets of legal enforcement—such as the doctors who spearheaded the tort reform movement beginning in the mid-1970s.⁵¹ But increasingly, dissatisfaction has extended to those who arguably command the best law has to offer: the large corporate clients who secure the services of the largest and most prestigious law firms, populated with elite law graduates.⁵²

Some of the dissatisfaction with legal markets expressed by corporate clients is undoubtedly driven by the substantial increases in legal costs over the past decade. Total receipts in law firms rose a whopping 32% in nominal terms, roughly 15% adjusted for inflation,⁵³ in just five years between 2002 and 2007.⁵⁴ The California Bar Journal recently reported “a survey by the Corporate Executive Board found that large-company spending on law firms grew by 49 percent between 2002 and 2005.”⁵⁵ Much of this increase appears to come from increasing fees, not hours. Although reliable industry-wide data on average hourly rates is hard to come by, there is some evidence that hourly rates in top law firms have been increasing at roughly this rate since the late 1990s. Firms reporting data to the *American Lawyer Magazine* (which generates the AmLaw 200) indicate that between 1999 and 2005 the average “low” billing rate for partners and associates increased 18-20% in real dollars; the average “high” billing rates increased 28-30%. And the Corporate Executive Board survey

⁵⁰ MARC GALANTER, *LOWERING THE BAR: LAWYER JOKES AND LEGAL CULTURE* (2002); Marc Galanter, *The Turn Against Law: The Recoil Against Expanding Accountability*, 81 TEXAS L. REV. 285, 292–300 (2002).

⁵¹ THOMAS F. BURKE, *LAWYERS, LAWSUITS, AND LEGAL RIGHTS: THE BATTLE OVER LITIGATION IN AMERICAN SOCIETY* 30–31 (2004).

⁵² Marc Galanter, *Changing Legal Consciousness in America: The View from the Joke Corpus*, 23 CARDOZO L. REV. 2223, 2234 (2002).

⁵³ Inflation adjustment made using U.S. Bureau of Labor Statistics CPI Calculator. *Consumer Price Index Inflation Calculator*, BUREAU OF LABOR STATISTICS, <http://data.bls.gov/cgi-bin/cpicalc.pl> (last visited Feb. 17, 2012).

⁵⁴ *Professional, Scientific, and Technical Services: Geographic Area Series: Comparative Statistics for the United States (2002 NAICS Basis) 2007 and 2002*, U.S. CENSUS BUREAU, http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2007_US_54A2&prodType=table (last visited Feb. 19, 2012).

⁵⁵ Diane Curtis, *Will a Bad Economy Force More Changes in the Profession?*, CALIFORNIA BAR JOURNAL, Jan. 2009.

noted above also found that “while non-law firm costs increased by 20 percent over the past 10 years, large law firms’ prices jumped almost 75 percent in the same period.” Average profits per partner increased 50% in real terms from 1999 to 2005.⁵⁶

The cost of legal procedures is also increasing rapidly. The advent of e-discovery, for example, is driving up the cost of litigation. In one estimate, revenues to e-discovery firms were \$2.7 billion in 2007, and projected to reach \$4.5 billion by the end of 2010.⁵⁷ A senior partner with a large Los Angeles firm reports that in a recent bid on major litigation, the bid for e-discovery services was approximately \$20 million; the bid for attorney services was \$4 million.⁵⁸ The average cost of patent litigation where \$25 million or more is at stake has grown from approximately \$4 million in 2003 to approximately \$5.5 million in 2009—an increase of almost 40% in nominal terms, 18% in real terms.⁵⁹ As the Association of Corporate Counsel noted in a recent publication introducing its new “Value Challenge” initiative, the “stunning” finding by the Corporate Executive Board that over the past decade large law firm prices have increased by 75%, almost four times the 20% growth in non-law firm costs, “confirm[s] the disconnect most if not all of us have been feeling.”⁶⁰

The concern about cost and fee increases has recently increased the pressure on law firms to come up with more cost-effective ways of organizing work. Mitt Regan and Palmer Heenan, for example, have recently explored the pressure on large law firms to increase their use of outsourcing and disaggregation of legal services to reduce costs.⁶¹

⁵⁶ The American Lawyer Media data is on file with the author. The AmLaw data collection does not ask for information about what proportion of total hours at the firm are billed out at the “high” and “low” rates—or intermediate rates.

⁵⁷ SOCHA CONSULTING, 2008 SOCHA-GELBMANN 6TH ANNUAL ELECTRONIC DISCOVERY SURVEY, <http://www.sochaconsulting.com/2008surveyresults.php> (last visited Feb. 18, 2012).

⁵⁸ Private communication.

⁵⁹ AM. INTELLECTUAL PROP. ASS’N, REPORT OF THE ECONOMIC SURVEY 29 (2009). Inflation adjustment made using U.S. Bureau of Labor Statistics CPI Calculator. BUREAU OF LABOR STATISTICS, Consumer Price Index Inflation Calculator, <http://data.bls.gov/cgi-bin/cpicalc.pl> (last visited Feb. 18, 2012).

⁶⁰ ASS’N OF CORPORATE COUNSEL, ACC VALUE CHALLENGE BRIEFING PACKAGE (2011), <http://www.acc.com/advocacy/valuechallenge/toolkit/loader.cfm?csModule=security/getfile&pageid=433000&title=ACC%20Value%20Challenge%20Briefing%20Package>

⁶¹ Milton C. Regan Jr. & Palmer T. Heenan, *Supply Chains and Porous Boundaries: The Disaggregation of Legal Services*, 78 FORDHAM L. REV. 2137 (2010).

Whether increasing disaggregation of conventional legal tasks—outsourcing document production and review and legal research, for example—will lead to cost reductions is unclear (arguably, disaggregation of tasks in litigation, for example, with document review outsourced to armies of junior associates and electronic discovery vendors has increased, not decreased, the costs of litigation),⁶² but in any event cost reduction alone does not seem to be at the heart of the deeper problems facing legal markets. As the ACC's initiative—which includes the development of an index rating the performance of law firms⁶³—reveals, the concern with costs bespeaks a much more basic concern with the value of what legal expenditures accomplish.⁶⁴ As lawyers frequently will point out to their corporate clients, legal fees are still only a fraction of the value of the deals that lawyers help to structure or the potential liability risks that lawyers help firms to avoid. But industry survey data suggests that large corporate clients perceive a substantial gap between cost and value—the so-called “value proposition.” In the 2009 Altman Weil Chief Legal Officer Survey, for example, half of the respondents gave a response of “6” or higher when asked how much pressure, on a scale of 0 (“no pressure”) to 10 (“intense pressure”), corporations were putting on law firms “to change the value proposition in legal service delivery (as opposed to simply cutting costs).” When asked how serious they thought law firms were about changing the value proposition, nearly three-quarters answered “4” or less. Forty percent said they intended to reduce their use of outside counsel in 2009—following reductions of 26% in 2008 and 16% in 2007.⁶⁵

⁶² The billing of junior associate hours on discovery and due diligence document review, for example, has spurred some corporate clients to refuse to allow junior associates on their litigation teams—suggesting that the work has been judged to be of too low value when completed by disconnected suppliers. Similarly, electronic discovery services seem to have increased, not decreased, the cost of the discovery phase of litigation. Regan and Heenan advert to these integration concerns when they note that increasing disaggregation of tasks requires additional efforts at re-integration into a final product and that lawyers, traditionally, have not shown expertise in project management. *Id.* at 2138–39.

⁶³ See ASS'N OF CORPORATE COUNSEL, *supra* note 60, at 6.

⁶⁴ See *id.* at 1.

⁶⁵ ALTMAN WEIL INC., 2009 CHIEF LEGAL OFFICER SURVEY: THE OPINION OF CHIEF LEGAL OFFICERS ON ISSUES OF IMPORTANCE, 5, 11, 14 (2009), *available at* http://www.altmanweil.com/dir_docs/resource/b8420fda-5d98-42a5-af27-45aec7c9b177_document.pdf. The Altman Weil survey is based on 183 responses from Chief Legal Officers of corporations, 62% of which have annual revenues of over \$2 billion; 68% have annual legal budgets (inside and outside counsel) in excess of \$5 million.

Even more telling is a 2006 survey conducted by the BTI Consulting Group.⁶⁶ This survey of 250 corporate counsel at large and Fortune 1000 firms (24% of the Fortune 100) found substantial levels of dissatisfaction with law firm providers. Sixty-eight percent said that they would not recommend their primary law firms to others; 61% had replaced a primary firm within the past eighteen months. Until 2005 the one or two firms identified as “primary” accounted for half of a company’s expenditure on outside counsel; that share fell to 30% in 2006. Low satisfaction with performance resulted in companies hiring more “secondary” firms, increasing from an average of seven firms accounting for 30% of total expenditures in 2004 to fifteen firms accounting for 50% in 2006. This suggests significant dissatisfaction with premier providers. Moreover, the dissatisfaction was not based on cost but rather on a failure of what the study calls “client focus:” understanding of, and responsiveness to, the client’s needs and business and a demonstrated ability to help the company achieve its business goals. As BTI puts it: “True client focus demands the ability to frame legal issues in [the] context of [the client’s] business and industry.”⁶⁷ Asked what they would advise law firms to do to earn the company’s business, 25% of corporate counsel responded “demonstrate exceptional client focus.” Another 50% appealed to other factors that reflect an ability to work in a high-value way with the client. Only 2% cited “lower rates” as the way to earn work. Client statements in the report emphasize that the problem is understanding the nature of the client’s business circumstances and problems. Law firms should “develop an understanding of our business and business strategy and stay focused on those, rather than on legal issues solely,” said one in-house lawyer at a Fortune 500 pharmaceutical firm; “A firm with client focus would have awareness of how their advice would affect the broader business,” said another from a Global 500 investment bank.⁶⁸

Comparable results were recently found in an academic survey conducted by Michelle Beardslee, John Coates, Ashish Nanda, and David Wilkins at Harvard Law School. Although not focused directly on surveying client satisfaction, their study of 166 corporate counsel at large corporations found that 80% had reduced the work given to a

⁶⁶ BTI CONSULTING GROUP, INC., *HOW CLIENTS HIRE, FIRE AND SPEND: LANDING THE WORLD’S BEST CLIENTS* (2007).

⁶⁷ *Id.* at 33.

⁶⁸ *Id.*

preferred provider between 2003 and 2006; 88% reported that the reason for doing so was a failure of quality or responsiveness to the company's needs. Cost was not mentioned as a factor leading to reductions in work.⁶⁹

There is reason to think that a failure in the legal industry to understand and respond to business needs is also behind some of the stunning changes in legal markets wrought by the recession of 2009.⁷⁰ Law firms for the first time in 2009 engaged in widespread layoffs of attorneys, deferred the hiring of entire classes of new law school graduates, and substantially reduced their recruiting of future classes. Several firms have announced that they will move away from lock-step compensation to merit-based compensation models. Although calls for alternatives to the hourly fee have been around for at least a decade,⁷¹ in 2009 for the first time clients have successfully required law firms to absorb more responsibility for producing value, with fixed annual and project budgets.⁷² Unlike in earlier recessions, when law firms were effectively recession-proof—able to shift from working on the transactional matters that boom in good times to the bankruptcy and litigation matters that (used to) boom in bad times—law firms in this recession have simply found themselves facing lower demand. This is consistent with the survey findings reported above indicating dissatisfaction with the quality of product delivered by legal markets, and in particular the value of legal work to achieving bottom-line business objectives.

⁶⁹ Michelle DeStefano Beardslee, John C. Coates IV, Ashish Nanda & David B. Wilkins, *Hiring Teams from Rivals: Theory and Evidence on the Evolving Relationships in the Corporate Legal Market*, CELS 2009 4TH ANNUAL CONFERENCE ON EMPIRICAL LEGAL STUDIES PAPER (Feb. 21, 2009), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1442066.

⁷⁰ See Ribstein, *supra* note 6.

⁷¹ See, e.g., Stephen W. Jones & Melissa Beard Glover, *The Attack on Traditional Billing Practices*, 20 U. ARK. LITTLE ROCK L. J. 293 (1998) (noting that task-based billing can be more appropriate in certain circumstances); RICHARD REED, BILLING INNOVATIONS NEW WIN-WIN WAYS TO END HOURLY BILLING 133–58 (1996); The Corporate Counsel Section of the New York State Bar Association, *Legal Development: Report on Cost-Effective Management of Corporate Litigation*, 59 ALB. L. REV. 263 (1995).

⁷² Pfizer, for example, with an annual legal budget of \$1.5 billion, announced in 2009 that it would no longer pay any of its attorneys on an hourly basis. This followed earlier policies that prohibited the use of first and second year associates on their matters. See Amy Miller, *No More Baby Steps*, LEGALWEEK, Jan. 21, 2010; Nathan Koppel & Ashby Jones, *Billable Hour Under Attack in Recession, Companies Push Law Firms for Flat Fee Contracts*, WALL ST. J., Aug. 24, 2009, at A1.

The sense that law providers “just don’t get it” was also a pervasive theme in the small set of interviews I conducted with general counsel in innovative firms in Silicon Valley in 2006–2007. These interviews were open-ended responses to the question, “How does the existing legal system help and how does it hinder innovative activity?” Putting flesh on the bones of what it means to say that outside legal counsel lack sufficient “focus” on the client’s needs and business, as I discussed in the Introduction, those I interviewed gave dramatic examples of what they simply couldn’t find in our existing legal infrastructure. Harvey Anderson of Mozilla put this point starkly:

Our lawyers just don’t know what we do, how a business like this works. There’s a massive DNA gap. I want lawyers who will come spend time here, getting to know how this business works, what we need and what we don’t. I have a hard time getting outside counsel to take up my offer.

Kent Walker of Google emphasized the difficulty he faces getting transactional lawyers—both inside and out—to focus on overall deal value, and not contract language per se. Lawyers, he notes, are rewarded for the contracts they complete but not for the deals that they save or increase the value of by showing restraint in negotiation and drafting. He can see that some deals, for example, can get by just fine with only a few pages of contract language; but he finds that when he sends those few pages to lawyers outside the company or on the other side, he invariably finds that they send back several more. Anderson of Mozilla similarly bemoans the transactional frictions generated by a mismatch between contracting efforts and an understanding of the business value of contracting.

Some of the misplaced attention to legal detail—beyond what is required to achieve business objectives—can be attributed to professional tunnel vision: when all you have is a hammer, everything looks like a nail. But some can also be attributed to pervasive difficulties among lawyers when it comes to thinking about business risks. Examples of this are in the anecdotes Jonathan Anshell of CBS Television related about lawyers who walk into every meeting on a new venture saying, “Are you sure you want to do this? It’s very risky,” or who struggle to balance risk and opportunity in drafting terms of use for online media.

Mark Chandler at Cisco Systems Inc. emphasized a different kind of disconnect from underlying business realities. His story of Cisco’s litigation with a Chinese competitor demonstrates his difficulty

finding a litigation team that can integrate expertise across multiple areas—litigation, finance, communications—instead of leaving it to him to integrate these cross-cutting considerations.

There is another form of fragmentation and compartmentalization in legal services that the General Counsel with whom I spoke identified as a problem for them. This is the fragmentation of expertise within law itself across jurisdictional lines. Mitch Gaynor of Juniper Networks talked about the difficulty he has finding integrated legal providers to deal with a complex world. Driven by regulatory limitations on the practice of law that have made each local state or country bar a monopoly, the market simply does not offer deep expertise in how to manage compliance in multiple jurisdictions. Even a mega-company like Google—which at one point was also a “global from Day One” start-up company too—finds itself unable to purchase outside expertise in managing wicked compliance problems.

Although the evidence is partial, these survey results and anecdotes suggest that there are substantial gaps between what our legal infrastructure is providing and what the new economy is demanding from law. The problem is not one that can be met through the kind of cost-reductions that can be squeezed out with outsourcing or rearrangements of the organizational structure of conventional legal practice. Reducing the cost of processing millions of documents by using contract lawyers, cheaper associates, offshore services, or electronic data analysis can only compress the cost so much; the real economic mismatch lies with a legal solution that requires review of millions of documents in the first place. That problem, the problem of mismatch, lies in the incentive structure facing legal markets and their capacity to generate significant innovations in the solutions law offers. A review of the dominant attributes of our legal infrastructure and the materials it provides for solutions to the legal problems faced by the prototypical new economy enterprise provides another basis on which to ground the claim that our legal infrastructure is doing a poor job of supporting the new economy.

D. WHERE WE ARE TODAY: ATTRIBUTES OF OUR LEGAL INFRASTRUCTURE

In this section, I set out the dominant characteristics of our existing legal infrastructure. In the next section I then explore how those characteristics impede the ability of the legal system to meet the economic demand for law in the new economy. Note that my goal here is not to be exhaustive, and clearly there is diversity in the legal materials and processes available, even within the U.S. But it is

possible to develop a stylized snapshot of the legal infrastructure that a business in the new economy will confront.

1. DOCUMENT/TEXT-BASED RULES

Although I emphasize that legal infrastructure consists of large quantities of inputs that are not legal rules, rules nonetheless are the fundamental organizing structure of legal work. And one of the most salient features of the legal environment for the new economy entity is that it is awash in a high volume of document-based rules. The business of an economic entity is affected by local ordinances and by state and federal regulations and statutes, both domestic and foreign. These are found embedded in a large set of documents, some but not most of which will be easily located and searched online. Regulations can and do cover every detail of how the business is operated: employment practices, taxes, workplace health and safety, pricing, advertising, managerial conduct, manufacturing standards, disclosures to investors, consumers, the government and the general public, environmental practices, and so on. Another potentially large set of documents containing rules governing the conduct of the business will be found in agreements that the business has entered into: supply contracts, loan agreements, corporate by-laws, investor deals, partnership agreements, employment contracts, intellectual property licenses, joint venture arrangements, agreements with governments or citizen associations, etc. Still further rules—and essential information for the interpretation of the rules found in other documents such as legislation or contracts—are found in judicial opinions from multiple court systems.

In the modern American setting, these documents have distinctive features, relative to other settings and periods in history. In particular, the documents tend to be long, highly detailed, and densely worded. The health care legislation originally proposed in the Senate in 2009, for example, contained 107,000 words; the House bill 167,000 words. By way of comparison, the first major piece of federal regulation, the Interstate Commerce Act of 1887, contained 5800 words;⁷³ it took around 15,000 words to spell out a major piece of New Deal legislation establishing the welfare state—the Social Security Act of 1935;⁷⁴ and even in the renewed regulatory environment of the 1970s,

⁷³ See Interstate Commerce Act of 1887, 24 Stat. 379 (1887).

⁷⁴ See Social Security Act of 1935, Pub. L. No. 74-271, 49 Stat. 620 (1935).

the Clean Air Act required only about 19,000 words.⁷⁵ The number of pages in the Federal Register in 1949 was 19,335; by 2005 the total had reached 134,261.⁷⁶ Anecdotally at least it is widely believed that American business contracts are longer and more detailed than their European counterparts.⁷⁷ Judicial opinions have grown increasingly lengthy and dense—often footnoted—over the last several decades. U.S. Supreme Court opinions averaged on the order of 760 words in 1800 and 2,129 words in 1951; today's average is roughly 4300 words.⁷⁸ In 1960 the average federal appellate court judge produced 86,000 words a year; by 1993 he or she produced 112,000.⁷⁹ The U.S. Court of Appeals for the D.C. Circuit, which is the premier court hearing federal administrative cases, went from an average of 5.9 pages per opinion in 1965 to 12.4 pages in 1985.⁸⁰

The wordiness of the American legal landscape, however, does not imply that determining the content of legal rules and relationships is simply a matter of plowing through ever-larger volumes of detailed text. Equally salient is the fact that the language in legal texts is often difficult to interpret. This is so for at least two reasons. First, legal language is esoteric, and indeed, increasingly so. While it has long been the case that legal language has functioned as a sublanguage which must be learned and is often not intelligible to lay persons,⁸¹

⁷⁵ See Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (1970).

⁷⁶ John W. Dawson & John J. Seater, *Federal Regulation and Aggregate Economic Growth* (Dept. of Economics, Appalachian State University, Working Paper No. 09-02, 2009), available at <http://econ.appstate.edu/RePEc/pdf/wp0902.pdf>.

⁷⁷ Claire A. Hill & Christopher King, *How Do German Contracts Do as Much with Fewer Words?*, 79 CHI.-KENT L. REV. 889, 889 (2004).

⁷⁸ Ryan C. Black & James F. Spriggs II, *An Empirical Analysis of the Trends, Determinants, and Effects of the Length of Majority Opinions of the U.S. Supreme Court*, 45 HOUS. L. REV. 621 (2008).

⁷⁹ RICHARD A. POSNER, *THE FEDERAL COURTS: CHALLENGE AND REFORM* 153 (1999).

⁸⁰ Peter H. Schuck & E. Donald Elliott, *To the Chevron Station: An Empirical Study of Federal Administrative Law*, 1990 DUKE L.J. 984, 1070 (1990).

⁸¹ For a discussion, Veda Charrow, Jo Ann Crandall & Robert Charrow, *Characteristics and Functions of Legal Language*, in RICHARD KITTREDGE & JOHN LEHRBERGER, *SUBLANGUAGE: STUDIES OF LANGUAGE IN RESTRICTED SEMANTIC DOMAIN* (1982). The authors emphasize that the difficulty laypersons have in interpreting legal language (such as jury instructions) is due not only to the use of specialized vocabulary, but also non-standard grammar and syntax.

growing specialization within legal practice⁸² makes skilled interpretation of many legal documents the province of only a small sub-set of lawyers.

Second, legal language is frequently—deliberately—indeterminate. Interpretation of a legal document is not merely a matter of communication; it is a pragmatic prediction about the content and consequences of a legal relationship that will play out in adversarial settings. Even plain language is subject to creative argument and reframing; most legal language leaves a significant margin for different interpretations in context. Interpretation thus depends on a host of variables beyond linguistics: a body of case law, the likelihood of being able to produce admissible proof, judicial ideology or discretion or competence or attention, the beliefs and practices of other practitioners, etc. It also depends on the unpredictable turns of reasoning that can arise in a system of open, contestable reasoning committed to remaining susceptible to a previously unknown interpretation of, for example, words such as negligent or reasonable or material.

2. HUMAN CAPITAL-INTENSIVE CRAFT PRODUCTION

Legal services are characteristically provided on a craft model, where an attorney or team of attorneys evaluates the legal situation facing an individual client on an individual basis and an individualized strategy or plan is developed and implemented. Lawyers rely heavily on acquired experience and personal judgment in assessing the likely content and consequences of a legal relationship. Research materials are almost exclusively textual and legal in nature, requiring human-capital-intensive analysis. There is little systematic and quantitative data either available or put to use in developing legal advice or documents. There is little use of automated or computer-based methods to produce or deliver legal inputs, such as the predicted effect of different contract clauses or compliance strategies.

The craft model of production results in high degrees of variability in legal advice and strategy. But it also produces high degrees of standardization in documents. Standard practice for producing contract documents, for example, is to mark up (redline) a document developed for a previous deal or relationship—obtained from a client's own files, a law firm's shared precedents, or an online database. As a

⁸² John P. Heinz, Robert L. Nelson, Edward O. Laumann & Ethan Michelson, *The Changing Character of Lawyers' Work: Chicago in 1975 and 1995*, 32 LAW & SOC'Y REV. 751 (1998).

leading guide to contract drafting puts it: "In contract drafting, plagiarism is a virtue."⁸³ Linguists have described the resulting style as "frozen."⁸⁴

All of these features also add up to legal processes that, because of high human capital requirements, are high cost and generally quite slow, requiring significant inputs to achieve a result. This is evident in the review and negotiation of transactional documents; it is even more evident in litigation.

3. UNDIVERSIFIED PRODUCTION MODELS

The complexity of the legal landscape has contributed to the increasing levels of specialization in legal practice: few lawyers involved in providing large-scale business services are generalists, as they were several decades ago.⁸⁵ This specialization, however, is not unique to law: increasing specialization is evident in many economic sectors. What is distinctive about law is the extent to which the sector as a whole is cordoned off from other economic activity, resulting in a lack of diversification in both knowledge and financial structure.

With the (important) exception of in-house counsel (approximately 8-10% of the profession),⁸⁶ almost all lawyers work in all-lawyer environments where they are exposed to the ideas and problem-solving techniques of people with their same training and intellectual orientation.⁸⁷ Legal training is largely homogeneous—lawyers are trained in effectively identical law schools with the same curriculum and methods. Lawyers have little expertise in industry or business decision-making and have similar levels of risk-aversion, particularly as compared to business actors.

A lack of diversification also characterizes the organizational form in which some eighty percent of lawyers practice: the exclusively

⁸³ CHARLES M. FOX, *WORKING WITH CONTRACTS: WHAT LAW SCHOOL DOESN'T TEACH YOU* 42 (2008) ("A lawyer drafting a contract should always try to start with a form designed for the kind of transaction involved.").

⁸⁴ See Brenda Danet, *Legal Discourse*, in *THE HANDBOOK OF DISCOURSE ANALYSIS* VOL. 1 273–91 (Deborah Schiffrin, Deborah Tannen & Heidi E. Hamilton eds., 1985).

⁸⁵ See Heinz et al., *supra* note 82, at 761–62.

⁸⁶ AMERICAN BAR ASSOCIATION, *LAWYER DEMOGRAPHICS* (2009), available at http://new.abanet.org/marketresearch/PublicDocuments/Lawyer_Demographics.pdf.

⁸⁷ See Heinz et al., *supra* note 82, at 767–70.

lawyer-owned and financed law firm.⁸⁸ Almost all firms have the same pyramidal structure: senior partners who have direct (and generally personal and portable) relationships with clients⁸⁹ with lower tiers filled with more junior attorneys, some on a (shrinking) path to partnership, others on a contract basis.⁹⁰ There are few collaborative enterprises that merge legal expertise with other business expertise. The business model of the firm must be exclusively financed by withheld profits and bank loans, cutting innovators off from large-scale capital markets, private equity, and third-party financing and insurance. This lack of financial diversification limits the risk-bearing capacity of the firm, a factor that probably limits the capacity to move away from per-lawyer effort-based billing (whether based on tightly-monitored hours, as is the norm today, or loosely guesstimated “services rendered,” as was the norm in the mid-20th century) to project- or product-based billing. It also may account in part for the high levels of risk aversion we see in legal practitioners more generally.

4. MANDATORY RULES

The rules governing the conduct of a company or organization and available to it for structuring its business dealings are the product of government actors: legislators, regulators and judges. This means that a business entity surveying the landscape is not in the market to purchase rules but rather must largely take them as given. At best, the business entity can try to influence the public rule production process through lobbying efforts.

The rules produced by these public actors are by and large mandatory and which rules will apply to given conduct is not a matter of choice for the affected entities. There are important exceptions, however. Actors generally may choose which state law will govern their contracts, for example. They may choose to have their disputes determined by a private adjudicator applying consensual rules and

⁸⁸ AMERICAN BAR ASSOCIATION, *supra* note 86.

⁸⁹ Professional ethics rules adopted in almost all jurisdictions prohibit a law firm from requiring lawyers to sign a non-compete agreement that would prevent lawyers from taking clients when they leave a firm. *See, e.g.*, ABA MODEL RULES OF PROF. CONDUCT R. 5.6 (1983).

⁹⁰ *See* Heinz et al., *supra* note 82, at 767–70; Marc S. Galanter & William D. Henderson, *The Elastic Tournament: The Second Transformation of the Big Law Firm*, 60 STAN. L. REV. 1867 (2008).

procedures rather than a public judge following mandatory procedures. Corporations may choose the state of their incorporation, separate from the choice of where they locate their operations. There is little scope, however, for choosing which regulatory or liability regime will apply to business activities, short of controlling (generally the location of) the conduct that may trigger the exercise of jurisdiction by a potential regulator or court system.

Once framed, a given legal question is generally subject to the exclusive authority of only one rule maker, even if that authority is contested in practice. With the potential for claims to be framed as legal questions in multiple ways, however, the capacity to impose mandatory rules on a particular business activity or event is frequently fragmented and overlapping. Legal claims that impact a given activity can be stated under multiple federal and state statutes and regulations or common law: the fact that a federal court has turned away an action under the federal Sherman Act, for example, does not eliminate the potential for antitrust actions under state statutes or common law claims for unfair competition or fraud; a tort decision under California law does not bind a court adjudicating a tort claim for the same conduct under New York law.⁹¹

E. THE MISMATCH BETWEEN LEGAL INFRASTRUCTURE AND EMERGING LEGAL DEMAND IN THE NEW ECONOMY

We are now in a position to better understand the complaints we hear in interviews and surveys of corporate counsel. These clients—with the best chance, compared to government and consumer clients, of getting what they want from the legal system—are complaining about potholes, missing bridges, and circuitous routes in the legal infrastructure on which they depend to obtain results for their companies. Using the analysis above we can see the reasons to believe that the problems they are identifying are systematic and widespread, and not merely the result of blips in their local markets for legal inputs. In this section I re-visit the problems the general counsel I spoke with raised in light of what they indicate about the nature of legal demand in the new economy and the legal infrastructure available to meet that demand.

⁹¹ Robert Kagan presents a detailed picture of how multiple federal, state and municipal regulatory agencies, along with federal and state courts, generated a tangled web of litigation and regulatory process that delayed by several years the dredging of the harbor in Oakland, California to accommodate larger container ships. ROBERT A. KAGAN, *ADVERSARIAL LEGALISM: THE AMERICAN WAY OF LAW* 25–29 (2001).

Kent Walker of Google and Harvey Anderson of Mozilla both spoke about the problem of “transactional friction” and in particular the time and money seemingly wasted on producing what they perceived as too many and excessively long contracts and other business documents. While such a complaint may seem mundane, there is reason to believe that their special emphasis on this is rooted in the innovative new economy environment in which they operate. Google and Mozilla are on the leading edge of the explosive demand for legal support for relationships that cross firm boundaries in the global networked economy. Moreover, the relationships that cross these boundaries are far from standardized; although they may well possess repetitive elements such as the need to protect confidential information or to make clear the limited scope of a relationship, they are fundamentally heterogeneous. These are relationships that are likely to be highly fluid, responding to a high velocity environment, and dealing with complex and highly uncertain emergent products and processes.

The lower tolerance for the conventional solution to contracting problems that Walker and Anderson express is easily understood in light of the several differences between their legal demand and that of the old economy firm, especially the prototypical mass-market manufacturing firm. They cannot afford substantial resources to develop a new solution for each such relationship and they generally do not have the scale in individual types of relationships to justify the investment in detailed individualized contract design. Nor do they expect the relationship to stay the same for very long, further reducing the fixed investment they can afford for a given stage in a relationship. Nor can they be confident about the dimensions of the relational issues they may face or the capacity to reduce those dimensions to contractual language that secures expectations; so many of their relationships are about products and processes that display high degrees of novelty and constantly-shifting complexity. These attributes are poorly suited to the conventional contractual environment Google and Mozilla face. Existing standardized contracts are ill-suited to the heterogeneity of these relationships and the high-end craft model of contract customization is too expensive for relationships that are high volume, constantly evolving, significantly intangible and complex. The conventional legal response to complex contracting problems is complex contracting—detailed, expensive, and dense.⁹² But as Anderson’s musing about open-source contracting

⁹² For example, Julie Martin, Associate General Counsel at Mozilla, recounted to me recently having heard about a 70-page document created to structure a \$5000 deal.

standards reveals, the need is for the kind of simple yet powerful, elegant, and intelligent solutions that his colleagues in software development generate to solve their complex programming problems.

The legal infrastructure available to firms like Google and Mozilla, however, is poorly equipped to respond to their demand for legal support for their firm boundary-crossing relationships. It offers a population of providers who rely heavily on replicating prior documents to produce new documents. This is a process that produces upward drift in verbiage and contributes to the “frozen” character of legal documents.⁹³ It is also a process that truncates the development of expertise in fundamental contract design; today’s lawyers are expert at analyzing and modifying existing contract documents but not at analyzing the fundamentals of a contractual relationship and designing a contract from the ground up.⁹⁴ Even if Walker develops an in-house staff with expertise in simpler, innovative contracts, he resides in a world of adversarial legal relationships in which providers on the other side are likely to be wary of the strategic implications of departing from convention, or who simply have not developed this alternative expertise. A single provider of a contractual solution retained by both parties is unheard of (but not unimaginable).

Nor are there providers who can bring to bear the kind of massive data-analysis that Google itself has innovated for its own products or the open-source networks that Mozilla generates to churn out software modules that can be used to perform repetitive programming tasks. There is no data to which Kent Walker can point to ground his intuitive judgment that the extra pages or the time that might be spent tweaking contract language costs a lot more than it is worth, much less a less human-capital-intensive data-based service that can design the appropriate legal structure for an exploding set of relationships. If Harvey Anderson wants to make use of open-source contract modules that cheaply and intelligently resolve repetitive issues in his transactions, Mozilla will have to produce those as well.

⁹³ Anna Trosborg, *Introduction to Laying Down the Law—Discourse Analysis of Legal Institutions*, 23 J. PRAGMATICS 1, 1–5 (1995).

⁹⁴ In addition to the anecdotal evidence of this, John Coates’ study of the use of takeover defenses in IPOs provides systematic evidence that lawyers adopt contract terms based not on the fundamentals of an economic relationship, but rather on their custom. His data show that differential adoption of takeover defenses is not explained by underlying issuing firm characteristics but rather by the practice location of the lawyers representing the firm. John C. Coates IV, *Explaining Variation in Takeover Defenses: Blame the Lawyers*, 89 CAL. L. REV. 1301 (2001).

Both Anderson and Walker also point to a deeper and subtler obstacle to meeting their contracting needs with existing legal infrastructure, which is what Anderson calls “the DNA gap.” By this he means the relatively low understanding of the nature of his business that he finds among legal professionals. This is a natural result of the highly specialized nature of legal practice and the almost cloistered settings in which it is practiced. The knowledge, culture, and language that lawyers acquire are the knowledge, culture, and language of law, not business—this separates lawyers from the other providers of specialized business inputs such as marketing executives, accountants, finance people, and product development engineers. This disconnect starts at the educational level—lawyers in law school, the rest in business school—and continues for the great majority of lawyers throughout their careers.

Those who work at in-house legal departments are better equipped to acquire a deep understanding of the needs and processes of business entities—but even then, as Kent Walker’s comments suggest, there are substantial limits. Walker notes the difficulty of giving even his in-house lawyers—who scoot around the playground that is Google alongside the software engineers and business folks—the right incentives in contract design. We have the knowledge and systems in place to reward, and penalize, lawyers for legal results—the contract that is signed, the lawsuit that exploits an ambiguity in contract language—but not for business results—the deal that was missed or made less valuable by too many words or belabored negotiations. Some of these features appear to induce excessive risk-aversion among lawyers: it is not just that lawyers are taught to see the potential problems, it is that if things go wrong *ex post* because a contract provision is open to an unhelpful interpretation or missing entirely, the lawyer is dinged for the failure. This happens even if the *ex ante* choice to stick with simple language or less expensive contracting methods was the right bet to take. But the lawyer is not easily rewarded for the cases that do not bark and so overreacts to even small risks of failure. Structurally, because of the organization of legal work and expertise, lawyers bear the downside risks asymmetrically with the upside risks of more targeted, cost-effective lawyering. Better risk analysis requires data analysis—which existing legal markets do not do—and risk distribution—which limitations on the diversification of financing and ownership of legal providers restrict.

Jonathan Anschell’s experiences at CBS Television reflect similar limitations on the nature of the legal inputs CBS can secure from the existing legal infrastructure. He too talks of a shortfall in what outside counsel understand about the nature of the fast-moving and

inherently risky and inchoate deals the company has to pursue. The fact that even at the highest levels of the corporate bar attorneys are predominantly oriented to emphasize risk avoidance makes searching and paying for the exceptional lawyer who has developed expertise in managing risk in ambiguous settings a burden. Although business managers no doubt differ in their success in risk management, it would be striking indeed if risk avoidance were the norm rather than the exception in that profession.

Lawyers have long been tagged with conservatism, of course. And a conservative role has long been seen as largely appropriate: lawyers identify risks; business managers choose which risks they want to take and how they want to manage them. What is different in the new economy? To some extent what is new is the scale and centrality of risk, driven in particular by the importance of knowledge and innovation,⁹⁵ and the exposure of so much more of a firm's operations to the risks inherent in a cross-boundary relationship between independent actors as opposed to one found within a hierarchy ultimately governed by fiat from the top. To some extent it is the shift from quantifiable (and insurable) risk—what will happen to input prices in this market? Will demand for this (mass-produced) product continue to grow or decline?—to the unquantifiable uncertainty and ambiguity generated by high rates of novelty, network connectedness, more diverse and numerous competitors, and emergent business models and products. And to some extent what is new, compared to the more stable, standardized managerial economy, is the pervasiveness of law—both in private cross-boundary and cross-jurisdictional relationships and in public multi-jurisdictional relationships.

Together, these changes make the role of the lawyer one that, to be valuable, must be immersed in the process of structuring, analyzing, and responding to an ever-changing relational and regulatory terrain. Risks in this environment cannot be compartmentalized. The need is for relatively constant dialogue between legal expertise and business expertise and, particularly, co-creation of innovative legal structures to adapt to changing business circumstances and knowledge.

This is what Anschell is also reporting when he describes CBS's difficulty finding lawyers who know how to design a relational structure and not merely present a choice between two polar variants of a terms-of-use agreement: the standard terms that maximize ownership and control and the standard terms that maximize use and

⁹⁵ See Audretsch & Thurik, *supra* note 10.

access. This disconnect between business needs and what is offered by legal providers is not (just) attributable to a system based on adversarial contract development and contract drafting through replication of prior standardized models. It is the product of a system that compartmentalizes legal expertise in a world where novelty and fluidity dominate. If a lawyer does not deeply understand a client's business model and environment, he or she cannot design a novel structure that is not just an incremental adjustment to an existing standard. Nor can the involved business managers innovate a structure without deep knowledge of the legal tools, limits, and implications. Just as the creation of an innovative business model for CBS, Google, or Mozilla must be the product of fine-grained collaboration between software engineers, marketing experts, finance experts, and other business professionals, so too must the creation of an innovative legal structure be the product of fine-grained collaboration between law and business. Law in a dynamic business setting must be deeply integrated into the "DNA" of the business itself,⁹⁶ and that DNA is wired for uncertainty and risk. The segregation of legal and business expertise in our existing legal infrastructure stifles that integration.

Mark Chandler's anecdote about Cisco's litigation with a Chinese competitor demonstrates another aspect of the frustrated demand for integration of legal inputs with other professional inputs. In our existing legal infrastructure it is up to Chandler and his colleagues to integrate the advice about litigation strategy they receive from top-notch outside litigators with concerns about the impact of the

⁹⁶ For similar conclusions, see, e.g., Beverly A. Lyman, *Crafting a Patent Strategy in a Changing Environment*, DEVELOPING A PATENT STRATEGY: 2010 EDITION, available at 2010 WL 4466, at *20 ("My advice to business is to integrate the patent lawyer into business discussion as much as possible. . . . Patent lawyers cannot be just technically and legally focused. They must appreciate how the business will be affected and they have to see the business end of things, how it is going to play out down the road. Business strategy includes a realistic valuation of what any patent is worth in a changing market. The more lawyers know, the better they can obtain the best possible results."); Michael C. Cook, *Key Changes in Health Care Law Policies – And Upcoming Responses*, THE IMPACT OF RECENT HEALTH CARE LAW DEVELOPMENTS LEADING LAWYERS ON NAVIGATING CHANGES, OVERCOMING CHALLENGES, AND ADVISING CLIENTS IN A NEW ENVIRONMENT (2009), available at 2009 WL 4023554, at *8 ("In the coming years . . . [c]lients will place a premium on lawyers who they can consider to be strategic business partners, who will work with others to integrate solutions, who can see the big picture of their clients' businesses and strategies, and who can quickly respond This will require understanding our clients' businesses sufficiently to gauge whether, if you push a button and make a decision in one area, you can predict and advise how it may affect other areas and also longer-term implications.").

litigation on investors, the media, or other strategic goals. But just as Chandler, who oversees a massive legal department, relies on outside expertise about litigation strategy, so too would he like to be able to buy expert advice that integrates litigation strategy with communications or operations strategy.

The narrowly legal focus of outside counsel could be a sign of an appropriate division of labor: in-house counsel accumulate and coordinate the expertise on the business side needed to integrate these expert legal inputs into an overall business strategy. But what the general counsel at the innovative firms I spoke to are emphasizing—what lies beneath the widespread dissatisfaction with the client focus of outside counsel found in the BTI study—is a demand to shift more of that integration outside of the firm. That is, the task of integrating legal advice with business expertise and other strategic considerations is no longer something that is so easily (if it ever was) done internally. This is consistent with what we know about the changes in the new economy: the deepened complexity and novelty of multiple business decisions—about new products, new partners, new business models, new finance models—calls for more collaborative participation in problem-solving from a wide spectrum of experts. Decisions in a complex high velocity environment are not as easily compartmentalized. The burgeoning dimensions of business problems are not additive—they are multiplicative and non-linear. The expertise has to be delivered around the table, not over the transom. I suspect the oft-heard complaint about problems with lawyer's communication⁹⁷ with their business clients is not the mundane type of communication that can be solved by providing more frequent emails and reports. It is the substantive type of communication—are you engaged in an ongoing and rich conversation with us about what you think and what we think?

The fragmentation of legal inputs goes even deeper than the compartmentalization of legal and business expertise. Even within the legal category, expertise is balkanized. Take Google's issues with YouTube, for example. To begin with, the regulations governing online video (obscenity, privacy, copyright, defamation, etc.) are produced in multiple, separate but overlapping jurisdictions in political and administrative processes that it can do little to manage. The conventional method of controlling exposure to regulatory regimes—control over the geographical distribution of a product—is effectively

⁹⁷ The BTI study notes that failures in communication are a key reason that relationships between corporate counsel and outside counsel fail. See BTI CONSULTING GROUP, INC., *supra* note 66.

unavailable for a product delivered over the Internet. There are few mechanisms available for choosing a regulatory regime. So any solution needs to integrate legal expertise across multiple jurisdictions. But this exposes the problem to a second form of fragmentation: legal expertise is sold in geographically segregated markets. Most countries (and all states in the U.S.) substantially restrict the provision of expertise about local law to providers (lawyers) who are admitted to practice locally.⁹⁸ In-house lawyers avoid these restrictions, but are left with the task of cobbling together expertise from individual country experts.

With employees and team members scattered across the globe, for example, Mitch Gaynor of Juniper Networks faces a multijurisdictional maze of employment, trade, and customs law. But the legal infrastructure available to him is composed only of a “patchwork of providers.” Of course any high-end law firm, if you pay them enough, can pour sufficient resources into digging into multiple regulatory regimes to give Juniper the answers it needs once Gaynor has formulated the question. But this is an extremely costly solution, beyond the reach of the new economy start-up that is “global from Day One.” There is no time to build a large in-house legal department and no budget for thousands of hours of research and memo writing by a far-flung army of associates and foreign partners. Moreover the solution is kludgy and inelegant: it does not offer a way of cutting through complexity, and instead compounds it. And that is frustrating in a new economy world where the essence of success is the simpler, smarter way of getting things done.

Lawyers are not immune to the can-do spirit of competitive markets. They experience their markets in fact to be quite competitive and the legal profession’s response to claims of inadequacy in the supply of legal inputs is often, “We can do that, just ask us.” The problem is not that lawyers are lacking in intelligence and the potential for creativity. It is that solutions generated in the existing business model—craft-based high intensity human capital deployed in organizations composed, financed, and managed exclusively by lawyers—are simply too homogeneous and too expensive relative to the value they generate. As pushback from even the largest firms

⁹⁸ For a discussion of how the regulation of lawyers domestically inhibits the development of integrated cross-jurisdictional legal solutions, see Gillian K. Hadfield, *The Role of International Law Firms and Multijural Human Capital in the Harmonization of Legal Regimes*, in *MULTIJURALISM: MANIFESTATIONS, CAUSES, AND CONSEQUENCES* (Albert Breton, et al., eds., 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=959422.

indicates, it is too expensive even for the mega-firms like Google and Cisco. But it is especially true for the high-energy, high-risk, high-return business activity that typifies the new economy: the innovative start-up, the experimental joint venture, the emergent network. The company that, like Juniper Networks, is “global from Day One.” Or that, like Mozilla, is committed to a business-model that fosters non-market collaboration of the type that Yochai Benkler has highlighted.⁹⁹ The legal infrastructure with which these new economy actors have to work is simply not capable of delivering what is needed. The solution is not sustainable.

IV. HOW DID WE GET HERE: SECONDARY LEGAL INFRASTRUCTURE

What accounts for this state of affairs? Why is our legal infrastructure—the set of legal materials and tools available to support and regulate economic activity—so poorly adapted to serving the needs of the new economy? And if the demand for legal inputs is fundamentally driven by economics it is reasonable to ask why such a poorly adapted system persists. The answer lies in understanding that legal infrastructure is largely an organic entity, produced by the actors who make up the legal sector. Mismatches in legal infrastructure are largely a result of even deeper elements of legal infrastructure, what we might call “secondary” legal infrastructure: the set of rules and institutions that determines who may participate in producing legal inputs, and how. (I am intentionally echoing H.L.A. Hart’s distinction between primary legal rules and secondary legal rules—secondary rules are the “rules for making rules” and in particular the rules of recognition in a given system that determine what it takes to produce a valid primary legal rule.)¹⁰⁰

These rules and institutions display two fundamental characteristics. First, public actors exercise a near-complete monopoly over rule production. These public actors include legislators, civil servants operating within administrative agencies in the executive branch of governments, and judges operating within courts, all of whom are by-and-large not experts in the substantive areas they regulate.¹⁰¹ Second, complementary services that implement formal

⁹⁹ See *supra* note 29.

¹⁰⁰ H.L.A. HART, *THE CONCEPT OF LAW* 77–96, 114 (1997).

¹⁰¹ All judges are trained as lawyers; many legislators are as well. In 2011, 68% of Senators and 36% of Congressmen were lawyers. AMERICAN BAR ASSOCIATION, *ABA CHARTS OF LAWYER-LEGISLATOR IN CONGRESS, 110TH CONGRESS*, *available at*

legal rules are provided in legal markets that are among the most highly controlled and protected in the modern economy. Ostensibly through state supreme courts and practically through state bar associations and the American Bar Association, members of the legal profession (lawyers and those lawyers who have become judges) both control who may supply legal inputs and the business models that can be adopted to finance and deliver legal inputs.

My claim is that poorly adapted primary legal infrastructure persists because our secondary infrastructure—based on publicly-supplied rules and a closed legal services market—imposes (at least) two fundamental barriers to entry: it expressly restricts many forms of supply to conventional and often public providers, and it indirectly derails innovation by crippling investment of venture capital in innovation of legal methods.¹⁰²

A. EXPRESS SUPPLY RESTRICTIONS

The displacement of costly and poorly adapted legal production methods in law is directly limited by formal constraints on who may supply legal inputs. Most of our legal rules can only be produced by publicly constituted entities. This is true for most forms of intellectual property protection (trade secret, copyright, trademark, patent), securities regulation, corporate law, bankruptcy, secured transactions, environmental regulation and so on. In general, businesses cannot choose between alternative providers; rules are imposed on a mandatory basis based on a jurisdictional determination also supplied by public actors. Where they can choose—as in corporate law, for example—they are restricted to choosing among public providers, specifically the states. Private providers—whether profit maximizing or non-profit—cannot compete for the business of designing a higher value, more cost-effective set of rules and procedures. And even in

<http://www.abanet.org/poladv/publications.shtml> [click on U.S. House of Representatives and U.S. Senate links] (last visited Feb. 18, 2012). Twenty-six out of forty-four U.S. presidents have been lawyers. Wikipedia, *List of Presidents of the United States by occupation*,

http://en.wikipedia.org/wiki/List_of_Presidents_of_the_United_States_by_occupation (last visited Feb. 18, 2012). Administrative agencies generally possess expertise but are heavily constrained by non-expert oversight and rulemaking by legislators and courts.

¹⁰² The following is discussed in more detail in Hadfield, *supra* note 7, and in Gillian K. Hadfield, *Privatizing Commercial Law*, 24 REG. 40 (2001), available at <http://www.cato.org/pubs/regulation/regv24n1/hadfield.pdf>. For another discussion of how regulatory restrictions limit adaptation of the Big Law business model, see Ribstein, *supra* note 6.

those cases in which public rules are supplied as defaults and parties can devise privately through contract an alternative set of rules, the terms on which those privately-designed rules will be enforced are governed by public rules—specifically those of state contract law. This leaves the private alternative embedded in the public production process of legal inputs.

But what prevents parties from going a step further and using state-provided contract law to enforce an agreement to adopt a wholly different, and privately-provided, mechanism for managing, at least, their contractual relationships? Particularly in light of the Federal Arbitration Act—which since 1925 has instructed American state and federal courts that they must enforce parties' agreements to arbitrate their disputes in private systems¹⁰³—parties have long been free to choose alternative mechanisms. Indeed, this is how the trade associations studied by Lisa Bernstein¹⁰⁴ operate their private, and distinctive, contract enforcement systems. Why have such systems not emerged outside of the prototypical old economy trade association composed of the buyers and sellers of a single commodity such as diamonds, grain or cotton?

The fate of even the minimal¹⁰⁵ effort to contract out of the evidentiary and procedural rules of state court systems through

¹⁰³ 9 U.S.C.A. §§ 1–307.

¹⁰⁴ See Lisa Bernstein, *Merchant Law in Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765, 1770–82, 1818–21 (1996) (explaining that the National Grain and Feed Association applies a heavily “formalistic” approach to dispute resolution that does not give much weight to “course of dealing, course of performance, and usage of trade”); Lisa Bernstein, *The Questionable Basis for Article 2's Incorporation Strategy: A Preliminary Study*, 66 U. CHI. L. REV. 710, 723, 725 (1999) (noting that some merchant arbitrators are often more strict and formalistic in rule application than the Uniform Commercial Code requires); Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724, 1735–37, 1745, 1771–73 (2001) (noting that “the Code directs courts to look to immanent business norms reflected in course of dealing, course of performance, and usage of trade, to fill gaps and interpret contracts, and directs them to take parties' actions under a contract as the best indication of what they intended. . . . In contrast . . . [cotton arbitrators] use a relatively formalistic adjudicative approach that gives little explicit weight to elements of the contracting context.”); Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115, 124–30, 135, 149 (1992) (explaining that the diamond industry does rely heavily on custom and trade usage to resolve disputes).

¹⁰⁵ The effort is “minimal” because parties including an arbitration clause in their contracts by and large do not contract out of state-provided substantive law, only the state-provided adjudication process.

private arbitration demonstrates the significant impact of the express limitations imposed by our secondary legal infrastructure on who can provide legal inputs. By most accounts, modern commercial arbitration is increasingly indistinguishable from litigation in terms of the resources devoted to discovery, evidentiary battles, and procedural moves.¹⁰⁶ Arbitration brings some important benefits—confidentiality and greater party control over the timing of procedures—but early hopes that the process would routinely dispense with expensive strategic litigation tactics, where costs on the margin seem clearly to outweigh benefits, have largely been dashed.

Arbitration, perhaps inevitably, looks like the process that lawyers and judges have created in public courts because lawyers and judges still dominate the process. Some of this is due to express arbitrator qualification requirements imposed by arbitration providers. For example, the Financial Industry Regulatory Authority (formerly NASD), whose rules must be approved by the SEC, requires that arbitrators¹⁰⁷ in employment discrimination suits be licensed attorneys.¹⁰⁸ A leading arbitration provider that advertises that its

¹⁰⁶ There is little data available to provide a firm basis for this assessment. For anecdotal accounts, see Gerald F. Phillips, *Is Creeping Legalism Infecting Arbitration?*, 58 DISP. RESOL. J. 37 (Apr. 2003); Perry A. Zirkel & Andriy Krahmal, *Creeping Legalism in Grievance Arbitration: Fact or Fiction?*, 16 OHIO ST. J. ON DISP. RESOL. 243 (2001); Christopher R. Drahozal, *Commercial Norms, Commercial Codes, and International Commercial Arbitration*, 33 VAND. J. TRANSNAT'L L. 79, 95–97, 107–08 (2000); Yves Dezalay & Bryant Garth, *Fussing About the Forum: Categories and Definitions as States in a Professional Competition*, 21 LAW & SOC. INQUIRY 285, 298–99 (1996); Thomas E. Carbonneau, *National Law and the Judicialization of Arbitration: Manifest Destiny, Manifest Disregard, or Manifest Error*, in INTERNATIONAL ARBITRATION IN THE 21ST CENTURY 115, 126, 130 (Transnational Publishers, Inc., Richard B. Lillich & Charles N. Brower eds., 1994) (“There is no doubt, in terms either of practice or prophecy, that arbitration (international or domestic) is well on its way to judicialization.”); Arthur W. Rovine, *Fast-Track Arbitration: A Step Away from Judicialization of International Arbitration*, in INTERNATIONAL ARBITRATION IN THE 21ST CENTURY 45–47 (Richard B. Lillich & Charles N. Brower eds., 1994). *But see* Deborah R. Hensler, *Our Courts Ourselves: How the Alternative Dispute Resolution Movement Is Reshaping Our Legal System*, 108 PENN. ST. L. REV. 165 (2003) (expressing confidence that arbitration has been effective in other ways, specifically in “creating [] a profound change in our view of the justice system”).

¹⁰⁷ Specifically, “chairpersons” who may serve as sole arbitrators or who chair three-person panels. See FINRA, CODE OF ARBITRATION PROCEDURE FOR CUSTOMER DISPUTES (FINRA Manual), §§ 12400, 12401, 10212, available at http://finra.complinet.com/en/display/display_main.html?rbid=2403&element_id=4096.

¹⁰⁸ *Id.* at § 10211. Another example of similar arbitrator qualification requirements is the California Mandatory Fee Arbitration Program, whereby California allows clients to opt for arbitration of their fee disputes with their former attorneys through program managed by

neutrals are required to follow substantive law—the National Arbitration Forum—requires that its neutrals be attorneys or retired judges.¹⁰⁹ But even without express requirements, lawyers and retired judges clearly dominate the market for arbitrators.¹¹⁰ JAMS, another leading provider, currently shows a list of neutrals that is almost exclusively attorneys and retired judges.¹¹¹

This is no doubt attributable, in part, to the control that lawyers have exercised over who may represent a party in an arbitration. Many state bar associations have deemed representation of another (other than one's employer or partner) before a private arbitration tribunal as the "practice of law."¹¹² As a result, non-lawyers, and indeed often out-of-state lawyers, are prohibited from providing representation.¹¹³ A recent Virginia State Bar decision, for example, held that a Certified Public Accountant who represented a client in arbitration before the then-NASD was engaged in the unauthorized

local state bar associations. (Attorneys are also permitted to compel clients to participate in the program when their fee agreement contains an arbitration clause). CAL. BUS. & PROF. CODE § 6200 (2010). At least one member of the arbitral panel for this program must be an attorney with a particular area of practice. *Id.* at §6200(e).

¹⁰⁹ See *The Forum Arbitration Difference*, NATIONAL ARBITRATION FORUM, <http://www.adrforum.com/main.aspx?itemID=5&hideBar=False&navID=55&news=3> (last visited Feb. 18, 2012).

¹¹⁰ Jay E. Grenig & Rocco M. Scanza, *Tear Down This Wall! The Case for the Non-Lawyer Employment Arbitrator*, 64 DISP. RESOL. J. 8 (2009).

¹¹¹ See *JAMS Resolution Centers*, JAMS, <http://www.jamsadr.com/locations> (last visited Feb. 18, 2012).

¹¹² See, e.g., *Rappoport v. Florida Bar*, 540 U.S. 967 (2003); Florida Bar re Advisory Opinion on Non-Lawyer Representation in Securities Arbitration, 696 So. 2d 1178, 1180 (Fla. 1997).

¹¹³ See MODEL RULES OF PROF. CONDUCT R. 5.5 (2007). Out-of-state lawyers can represent client in arbitration if the arbitration grows out of representation of client in their own jurisdiction. See *id.* California requires certificate filed with California State Bar Association and local attorney of record. See Cal. Code Civ. Proc. § 1282.4. New Jersey requires an out of state attorney to register with the Clerk of its Supreme Court and authorize the Clerk to receive process on the attorney's behalf. See New Jersey Comm. on Unauthorized Practice of Law, *Opinion 43: Out of State Attorney Representing Party Before Panel of the American Arbitration Association in New Jersey*, http://www.judiciary.state.nj.us/notices/ethics/UPLC_Opinion43supplementingop28.pdf (also recommending that AAA arbitrators require as part of filing process that out-of-state attorneys certify compliance with Rule 5.5, and raising the possibility that lawyer-arbitrators who fail to do so may be themselves in violation of ethics rules that require an attorney not assist another in the unauthorized practice of law).

practice of law.¹¹⁴ A recent opinion from the New Jersey State Bar held that even out-of-state attorneys (much less non-attorneys) are engaged in the unauthorized practice of law if they represent clients in arbitrations, or indeed in mediations, unless the service arises from their representation of the client in their own jurisdiction and they have registered with and paid the required fees of the New Jersey Bar Association.¹¹⁵ Lawyers have thus defined arbitration as a legal process over which they command regulatory control. With lawyers in charge of the process, it is not surprising that even if an arbitration provider or relevant agency (such as the SEC) authorizes non-lawyer arbitrators, a strong “market” preference will emerge for lawyers and particularly retired judges to serve as arbitrators.

The obstacle this imposes to the use of private contracting methods to develop alternative mechanisms for supplying legal inputs is especially dramatic because any truly innovative mechanism is likely to emerge organically and incrementally. Significant innovation is likely to require some initial foothold, some small experimental and limited use within the framework of an otherwise conventional method. But those conventional methods are fully controlled and conceptualized by existing legal providers: attorneys and judges.

B. CONSTRAINTS ON CAPITAL

The limitations on who may provide, and hence potentially innovate, legal inputs are compounded by constraints that attorneys have placed on the organizational form and financing of legal providers. Judges and lawyers in the U.S. have decided that entities financed by non-lawyers cannot supply legal services to the market—even if the entity’s business model requires that licensed attorneys actually provide any legal advice or representation to clients.¹¹⁶ This

¹¹⁴ VA. STATE BAR, UPL OPINION 214 (Apr. 8, 2008), <http://www.vsb.org/site/regulation/upl-opinion-214> (last visited Jan. 7, 2012). The NASD, now FINRA, rules governing arbitrations, because issued by a self-regulatory body subject to SEC oversight, must be approved by the SEC. Those rules establish that a non-lawyer may represent a party in an arbitration unless disallowed by state law. See FILING OF PROPOSED RULE CHANGE RELATING TO REPRESENTATION OF PARTIES IN ARBITRATION AND MEDIATION, SEC RELEASE 34-55604 (Apr. 9, 2007), <http://www.sec.gov/rules/sro/nasd/2007/34-55604.pdf>.

¹¹⁵ N.J. COMM. ON UNAUTHORIZED PRACTICE OF LAW, *supra* note 113.

¹¹⁶ The “corporate practice of law” doctrine emerged in New York in 1909. Bruce A. Green, *Future of the Profession: A Symposium on Multidisciplinary Practice*, 84 MINN. L. REV. 1115, 1120 (2000). It is represented in ABA MODEL RULES OF PROF. CONDUCT R. 5.4,

eliminates the corporate form as a vehicle for the supply of legal inputs and cuts legal innovation off from sources of private equity capital—the angel investments or venture capital, for example, that finance innovative ventures in other industries and the potential IPO that motivates them and many entrepreneurs. And, as Larry Ribstein has recently documented, debt financing contributed to the fragile financial structure of the high profile law firms that stunned the law world between 2003 and 2008 by failing.¹¹⁷

These constraints also cut legal innovation off from important sources of human capital. Non-profit entities governed by non-lawyers by and large cannot, for example, market different legal inputs to overcome inefficiencies in the lawyer-dominated model. Architects or engineers in the U.S., for example, cannot through their trade association market legal services specifically targeted at improving value for their industry. They can provide blank forms—so long as they do not provide any legal advice about how to fill the form in or which form to choose,¹¹⁸ but they cannot set up a subsidiary to serve as a law firm to industry participants. Nor can innovative lawyers who recognize the need to incorporate methods that fall outside of the traditional model of law look to non-lawyer software engineers, systems analysts, management consultants, accountants or psychologists as their partners in devising such methods.

Lawyers—through bar associations and as judges in state supreme courts—have put in place elements of the secondary legal infrastructure that ensure that they are in the primary position for any development of legal methods and inputs. They have established themselves as gatekeepers for innovation. It is in this sense that our

prohibiting the sharing of fees with non-lawyers or submission of legal work to non-lawyer control or supervision. Australia and New Zealand were the first jurisdictions to eliminate this requirement; the U.K. is implementing this reform now. For a discussion, see Milton C. Regan, Jr. *Lawyers, Symbols and Money: Outside Investment in Law Firms*, 27 PENN. ST. INT'L L. REV. 407 (2008).

¹¹⁷ Ribstein, *supra* note 6, at 20–23.

¹¹⁸ See, e.g., *In re Reynoso*, 315 B.R. 544 (9th Cir. BAP 2004) (solicitation of information which is then translated into complete bankruptcy forms is unauthorized practice of law); *Wash. State Bar Ass'n v. Great W. Union Fed. Sav. and Loan Ass'n*, 91 Wash. 2d 48, 55 (selection and completion of preprinted form legal documents by nonlawyer is unauthorized practice of law); *State ex rel. Ind. State Bar Ass'n v. Northouse* 848 N.E.2d 668 (Ind. 2006) (nonlawyer insurance agent and nonlawyer preparer of estate planning documents engaged in unauthorized practice of law). For a recent challenge to online legal document providers, see recently filed class action *Todd Janson v. LegalZoom*, 271 F.R.D. 506 (W.D. Mo.).

secondary legal infrastructure—committed to public and closed production methods in general—significantly constrains the potential for innovation in our primary legal infrastructure.

V. THE ROAD AHEAD: A GREATER ROLE FOR MARKETS IN THE PRODUCTION OF LEGAL INPUTS

The transformations in legal demand wrought by the attributes of a new globally networked web-based economy—facing high degrees of heterogeneity, high velocity and pervasive uncertainty—are clearly outstripping the capacity of our legal infrastructure to keep pace. The gaps and frictions and missing bridges identified by general counsel in leading innovative firms reflect the growing inadequacy of the set of legal inputs available to them to structure and regulate their economic relationships and environment. The primary legal infrastructure available to them is excessively document-based and human-capital intensive; and insufficiently diversified, flexible, and responsive to change and cost. That primary legal infrastructure is the organic product of a set of rules and practices governing the production processes of law—and it is at this secondary level of infrastructure that efforts to improve the quality of law must aim.

Those production processes cause law to grow in ways that are especially insensitive to the marginal costs and benefits of alternative means of accomplishing specific economic tasks such as controlling opportunism in a contracting relationship or encouraging investment in appropriable assets such as new ideas. The reason, I claim, is that public and highly protected providers dominate our production processes for law—not subject to the competitive benefits of markets. In the high velocity, high novelty, high complexity world of the new economy, those benefits are principally the innovation benefits that come from directing attention, effort, and resources to what is happening on the margin—where costs are coming from, where benefits are hidden, and how to creatively bring them into better alignment using methods and techniques measured against performance rather than the internal scholastic or adversarial values of a closed legal profession.

A greater role for markets in the production processes of law implies two key areas of reform. First, greater scope for competitive private production of legal rules. This requires that economic entities be given the ability to choose among legal providers, and that these legal providers include private firms and organizations. We already have the necessary enabling law that allows, for example, firms to choose their state of incorporation; and the idea that companies might

choose their securities regulator is now widely canvassed.¹¹⁹ Obtaining a greater role for markets in these settings merely requires expanding the choice set to include private providers. Extending choice into other legal areas certainly raises challenges—how to ensure that a market for alternative forms of intellectual property protection operates reasonably well if there is the risk that either users or producers of appropriable knowledge dominate the market, for example. But these are better challenges to undertake than to figure out how to get a slow-moving and politically-expedient Congress to solve the problem with 1000 pages of legislation, how to get solutions out of million-dollar lawsuits in front of juries and generalist judges applying scholastic reasoning and responding to adversarial pressures.

The fact that we have much less market-based private production of legal rules and systems than we already could have given the potential for private contracting and the enforceability of arbitration agreements, however, should alert us to the critical role in shaping legal production played by our extraordinarily closed markets for legal goods and services. This is why serious reform of our secondary legal infrastructure aimed at improving the quality of legal inputs available to the new economy also requires opening up the existing markets for private legal providers. State-by-state lawyer (including judge) control of who may provide legal services, in what form of organization, with what training, and with what kind of financial and management structure, erects a significant roadblock to the effort to drive innovation in legal production. We need more people who are thinking about how to deploy data to manage inchoate rapidly changing economic relationships, not more people thinking about how to draft more documents, to achieve that goal. We need more resources devoted to optimizing value-distribution in order to encourage investments in appropriable knowledge assets, not more resources devoted to developing expensive document management technology to respond to the e-discovery arms race in patent litigation. We need the kind of creativity that develops simple elegant user-interfaces for complex machines like the iPhone, not the kind of Rube Goldberg creativity that ratchets up the ambiguity and hence interpretive complexity of a contract or regulation. But our existing

¹¹⁹ See, e.g., Stephen J. Choi & Andrew T. Guzman, *Portable Reciprocity: Rethinking the International Reach of Securities Regulation*, 71 S. CAL. L. REV. 903 (1998); Roberta Romano, *The Need for Competition in International Securities Regulation*, 2 THEOR. INQUIRIES IN LAW 387 (2001); Howell E. Jackson & Eric J. Pan, *Regulatory Competition in International Securities Markets: Evidence from Europe in 1999-Part I*, 56 BUS. LAW. 653 (2001).

providers operate within a closed system that rewards excellence in the deployment of scholastic and adversarial instruments, not the invention of alternatives to them.

Only lawyers will find anything remarkable in the proposal that markets for legal goods and services should operate as most other markets do, with decisions about who can provide what goods and services where, with what training, in what organizational form and with what financing left largely to the market, subject only to the level of regulation necessary to make such a market reasonably competitive and responsive to social welfare. Lawyers will argue these are matters of professional ethics—but they are not. They will argue these are matters of consumer protection—but they are not. They are matters of economic policy. And, as one of the general counsel I spoke to remarked to me, law is too important to be left to lawyers. The stunning transformation we are witnessing in the economy and global economic relationships cannot be managed by the legal production methods of the old economy. It requires nothing less than a transformation of our legal infrastructure itself.

